EXHIBIT J

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UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

SAN FRANCISCO DIVISION

GOOGLE LLC, Plaintiff v. SONOS, INC., Defendant.	Case No. 3:20-cv-06754-WHA

GOOGLE LLC'S NINTH SUPPLEMENTAL OBJECTIONS AND RESPONSES TO PLAINTIFF SONOS, INC.'S FIRST SET OF FACT DISCOVERY INTERROGATORIES (NO. 12)

Pursuant to Rule 33 of the Federal Rules of Civil Procedure, Defendant Google LLC ("Google") hereby objects and responds to Plaintiff Sonos, Inc.'s ("Sonos") First Set of Fact Discovery Interrogatories to Defendant ("Interrogatories"). Google responds to these Interrogatories based on its current understanding and the information reasonably available to Google at the present time. Google reserves the right to supplement these responses if and when additional information becomes available.

GENERAL OBJECTIONS AND RESPONSES

1.   These responses are made only for the purposes of discovery in this action. Each response is subject to all appropriate objections as to competence, relevance, materiality, and any and all other objections and grounds that would require the exclusion of any information, documents, or statements contained in the responses if such information, documents, or statements were offered in court. Google expressly reserves all such objections and may interpose them at the time of trial or at any other time.

2.   Google reserves all objections as to the admissibility at trial of any information or documents identified in its responses to these Interrogatories. By identifying any document or supplying any information, Google does not admit that such information or document is relevant to or admissible in this litigation. Google reserves the right to object to further inquiry with respect to any subject matter.

3.   Google objects to the interrogatories, and to the definitions, to the extent that they purport to impose any obligations upon Google beyond the Federal Rules of Civil Procedure and the Local Rules of the United States District Court for the Northern District of California.

4.   Google objects to the definition of "Defendant," "Google," "You," or "Your" on the grounds that the definitions are overly broad, unduly burdensome, and vague, including but not limited to the extent that they include: any Google parent, subsidiary, division, or related company; any business entity controlled by or operated on behalf thereof; any predecessors thereof; and any and all agents, directors, owners, officers, attorneys, employees, representatives, subcontracts, and/or any person acting on its behalf.

5.   Google objects to the definition of "Accused Cast-Enabled App(s)" on the grounds that the definition is overly broad, unduly burdensome, and vague, including but not limited to the extent that it includes: any Google Cast-enabled app other than the YouTube Music app, Google Play Music app, YouTube app, Google Podcasts app, and YouTube TV app, and any third-party Cast-enabled app that allows a user to "cast" to an Accused Cast-Enabled Media Player (including but not limited to the Spotify app), and any Cast-enabled software (e.g., firmware and/or Cast-enabled apps) executable on an Accused Cast-Enabled Display that enables a user to "[m]ove media from

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1   one cast device to another," either collectively or individually. Google will respond with respect to

2   the YouTube Music app, Google Play Music app, YouTube app, Google Podcasts app, and YouTube

3   TV app.

4   6.   Google objects to the definition of "Accused Google Product(s)" to the extent it includes

5   Sonos's definition of the term "Accused Cast-Enabled App(s)."

6   7.   Google objects to the definition of "Accused Google Server[s]" on the grounds that the

7   definition is overly broad, unduly burdensome, and vague, including but not limited to the extent

8   that it purports to include: any server that hosts at least one of the Accused Cast-Enabled App(s) for

9   download, any server that facilitates casting from Chromecast-enabled apps to Accused Cast-

10   Enabled Media Player(s), any server that facilitates moving media from one cast device to another,"

11   and any server that, in response to user input at any Accused Cast-Enabled App, facilitates delivering

12   media to an Accused Cast-Enabled Media Player (including but not limited to any Cloud Content

13   Delivery Network (CDN) server), either collectively or individually. Google will respond with

14   respect to the servers specifically accused in Sonos's infringement contentions.

15   8.   Google objects to the instructions regarding "identify," "describe," or "identity" in the

16   context of a person on the grounds that the instructions are overly broad, unduly burdensome, and

17   vague, including but not limited to the extent that they require inclusion of: the person's present or

18   last known home address, business and e-mail addresses, and respective phone numbers; present or

19   last known place of employment and position; and his or her connection to the subject matter of the

20   interrogatory.

21   9.   Google objects to the instructions to "identify," "describe," or specify the "identity" in the

22   context of a person who is a past or present director, officer, employee, agent, or representative of

23   Google on the grounds that the instructions are overly broad, unduly burdensome, and vague,

24   including but not limited to the extent that they require specification of: all positions or employments

25   held by that person with Google, and the dates between which each such position or employment

26   was held.

27   10.   Google objects to the instructions to "identify," "describe," or specify the "identity" in the

28   context of an entity on the grounds that the instructions are overly broad, unduly burdensome, and

vague, including but not limited to the extent that they require specification of: the entity's place of incorporation or other business organization; it's principal places of business; its present or last known mailing and physical address(es) and e-mail and website addresses; its present or last known phone number; the type of entity or organization, its date and place of formation and any place(s) in which it is registered to conduct business; its registered agent; and the identity of all individuals employed by or acting for it at any time who have knowledge of the matter with respect to which the entity is identified.

11. Google objects to the instructions to "identify," "describe," or specify the "identity" in the context of a document on the grounds that the instructions are overly broad, unduly burdensome, and vague, including but not limited to the extent that they require specification of: the date it was authored, sent, and/or received; the identity of the author of the document; the identity of any recipient of the document; and the identity of the custodian of the document.

12. Google objects to the instructions to "identify," "describe," or specify the "identity" in the context of a communication on the grounds that the instructions are overly broad, unduly burdensome, and vague, including but not limited to the extent that they require specification of: the date it was authored, sent, and/or received; the identity of the author of the document; the identity of any recipient of the document; and the identity of the custodian of the document. Google further objects to the instructions regarding "identify," "describe," or "identity" in the context of a communication to the extent that they suggest Google is required to search and produce electronically stored information (ESI) before Sonos has shown good cause for ESI discovery, and the parties have agreed on a procedure for doing so in accordance with the Court's Standing Order.

13. Google objects to the instructions to "identify," "describe," or specify the "identity" in the context of a thing on the grounds that the instructions are overly broad, unduly burdensome, and vague, including but not limited to the extent that they require specification of: its physical particulars; the day on which it was made; the identity of the persons who made it; the identity of the persons who asked that it be made; its present condition; and its present location.

14. Google objects to the instructions to "state all facts" on the grounds that the instructions are is overly broad, unduly burdensome, and vague, including but not limited to the extent that it

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1 requires specification of: the identification of any person or entity having knowledge of any such

2 fact, including the last known address and phone number and the identity of any document,

3 communication, or thing that refers, relates, or evidences any such fact.

4   15. Google objects to each interrogatory to the extent it seeks information protected by the

5 attorney-client privilege or the work product doctrine or that is otherwise privileged or protected

6 from discovery.

7   16. Google objects to each interrogatory to the extent that it seeks information that is not relevant

8 to any claim or defense of any party or to the subject matter of this action, and is thus not

9 proportional to the needs of the case.

10   17. Google objects to each interrogatory to the extent it is compound and contains multiple

11 subparts.

12   18. Google objects to each interrogatory to the extent it is overbroad, unduly burdensome, vague,

13 and/or ambiguous.

14   19. Google objects to each interrogatory to the extent it seeks information that does not already

15 exist or that is not in Google's possession, custody, or control.

16   20. Google objects to each interrogatory to the extent it requires Google to provide information

17 beyond what is available to Google at present from a reasonable search of its own files likely to

18 contain relevant or responsive documents and from a reasonable inquiry of its present employees.

19   21. Google objects to each interrogatory to the extent it seeks confidential or proprietary

20 information, including without limitation, confidential business information, proprietary and/or

21 competitively sensitive information, or trade secrets. Subject to its other General Objections, and

22 to any specific objections set forth below, Google will only provide relevant information in a manner

23 consistent with a Protective Order entered by the Court in this matter.

24   22. Google objects to each interrogatory to the extent it is unlimited in time or otherwise not

25 limited to a timeframe relevant to this litigation, and is therefore burdensome, oppressive, overly

26 broad, and not proportional to the needs of the case.

27   23. Google objects to each interrogatory to the extent it seeks a legal conclusion or expert

28 testimony.

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24. Google objects to each interrogatory to the extent it seeks information that is publicly available and therefore as accessible to Sonos as to Google.

25. Google objects to each interrogatory to the extent that it is premature. Discovery is ongoing, and Google has not yet completed its investigation of the matters at issue in this action. Google reserves the right to modify, supplement, change or amend its responses after the Court has issued its claim construction order, and once Google has conducted the necessary discovery and investigation.

26. Google's responses are not to be construed as an admission that any of the requested information exists, that any information is admissible, relevant or proportional to the needs of the case, or that any contention or assumption contained in the interrogatories, whether implicit or explicit, is correct.

OBJECTIONS AND RESPONSES TO FACT DISCOVERY INTERROGATORIES

INTERROGATORY NO. 12:

Separately for each Asserted Claim of each Patent-In-Suit, set forth in detail the complete legal and factual basis for any assertion by Google that the Accused Instrumentalities have not infringed each such claim, including, but not limited to: an identification of each Asserted Claim of each Patent-In-Suit that Google believes is not infringed; an identification of which elements of each such Asserted Claim are allegedly not present in the Accused Instrumentalities; and for each claim element that is allegedly not present in the Accused Instrumentalities, an identification and detailed explanation of the basis for Google's assertion that the claim element is allegedly not present in the Accused Instrumentalities, including the basis for any assertion by Google that any differences between the claim element and the corresponding structure in the Accused Instrumentalities are not insubstantial and/or that the claim element and the corresponding structure in the Accused Instrumentalities do not perform substantially the same function in substantially the same way to achieve substantially the same result; and an identification of all facts supporting or refuting Google's non-infringement allegations, all persons knowledgeable of these facts (including every person whose knowledge or opinion is relied upon as a basis for Google's non-infringement assertions, the opinion or substance of his/her knowledge, and the entire basis of that knowledge or opinion), and all documents and things, including the Bates number(s) of such documents and things, concerning Google's assertion of non-infringement.

OBJECTIONS: Google incorporates by reference all of its General Objections as if fully set forth herein. Google objects to the characterization of this interrogatory as a single interrogatory given that it contains multiple discrete subparts under Fed. R. Civ. P. 33(a)(1). Google further objects to this interrogatory on the grounds that it is vague, ambiguous, unclear as to information sought, and lacking sufficient particularity to permit Google to reasonably prepare a response with respect to the undefined terms "differences between the claim element and the corresponding structure in the Accused Instrumentalities," "insubstantial," "do not perform substantially the same function in substantially the same way to achieve substantially the same result," and "knowledgeable

1 of." Google further objects to this interrogatory on the grounds that it assumes the existence of

2 hypothetical facts that are incorrect or unknown to Google.

3   Google also objects to this interrogatory as overbroad, burdensome, and not proportional to

4 the needs of the case, including to the extent it (i) seeks information regarding "[s]eparately for each

5 Asserted Claim of each Patent-In-Suit," (ii) seeks identification of "*all* persons knowledgeable" of

6 certain facts, and (iii) seeks "*all* documents things" concerning Google's assertion of non-

7 infringement. Google further objects to this interrogatory as overbroad and unduly burdensome to

8 the extent that it seeks information that is publicly available, not uniquely within the control of

9 Google, or is equally available to Sonos. Google additionally objects to this interrogatory to the

10 extent it seeks communications and information protected from disclosure by the attorney-client

11 privilege and/or attorney work product doctrine. Google further objects to this interrogatory to the

12 extent it seeks confidential and/or proprietary business information. Google also objects to this

13 interrogatory to the extent that it premature seeks expert discovery, opinion, and/or

14 testimony. Google also objects to this interrogatory on the grounds that it seeks information that is

15 obtainable through less burdensome and more convenient forms of discovery.

16   Google further objects to this interrogatory to the extent that it is premature insofar as it

17 seeks expert testimony before expert discovery. Google further objects to this interrogatory to the

18 extent it improperly attempts to shift the burden of proving infringement, which belongs to Sonos,

19 not Google. Google further objects to this interrogatory to the extent it purports to seek ESI before

20 Sonos has shown good cause for such ESI and before the parties have agreed on a procedure for

21 doing so in accordance with the Court's OGP.

22   **RESPONSE:**

23   Subject to and without waiving the foregoing General and Specific objections, Google

24 responds, as follows:

25   Google objects to this interrogatory on the grounds that it is premature, improperly seeks

26 expert testimony, and improperly attempts to shift the burden to Google. Sonos has failed to meet

27 its burden to serve infringement contentions that provide Google adequate notice of Sonos's

28 infringement theories and claims for infringement, and thus Google lacks sufficient information to

reasonably prepare a response to this interrogatory. Further, Sonos has yet to serve its Final Invalidity Contentions, and, to the extent Sonos's infringement contentions provide additional notice of Sonos's infringement theories Google anticipates that it will identify additional reasons why the accused products do not infringe. Nevertheless, based on Google's current understanding of the asserted claims, the Accused Instrumentalities do not infringe for at least the following reasons.

Representative Products

As an initial matter, Sonos improperly alleges that a wide variety of devices and applications infringe because they implement "'Cast' technology." Sonos does not provide notice of its theory of infringement for each accused product specifically, however, and does not provide any evidence that the numerous accused products that it is accusing operate in materially the same way. Sonos's patchwork analysis pulling together numerous different products under a vague assertion that they implement "Cast technology" is incomplete and fails to meet Sonos's burden to show that each of the accused products infringes the Asserted Claims of the Asserted Patents as a matter of law. *L & W, Inc. v. Shertech, Inc.*, 471 F.3d 1311 (Fed. Cir. 2006) (holding plaintiff failed to demonstrate infringement because "Shertech cannot simply 'assume' that all of L & W's products are like the one Dr. Holmes tested and thereby shift to L & W the burden to show that is not the case").

'615 Patent.

Claim 1. The Accused Instrumentalities do not infringe claim 1 because Sonos has not met its burden of proof to show that any of the limitations of claim 1 are satisfied. Additionally, the Accused Instrumentalities also do not infringe claim 1 because they do not contain or perform at least the following limitations of the claim:

- "detecting, via the control device, a set of inputs to transfer playback from the control device to a particular playback device, wherein the set of inputs comprises: (i) a selection of the selectable option for transferring playback from the control device and (ii) a selection of the particular playback device from the identified playback devices connected to the local area network"

- "after detecting the set of inputs to transfer playback from the control device to the particular playback device, causing playback to be transferred from the control device to the particular playback device, wherein transferring playback from the control device to the particular playback device comprises: (a) causing one or more first cloud servers to add multimedia content to a local playback queue on the particular playback device, wherein adding the multimedia content to the local playback queue comprises the one or more first cloud servers adding, to the local playback queue, one or more resource locators corresponding to respective locations of the multimedia content at one or more second cloud servers of a streaming content service; (b) causing playback at the control device to be stopped; and (c) modifying the one or more transport controls of the control interface to control playback by the playback device."

Claim 13. The Accused Instrumentalities do not infringe claim 13 because Sonos has not met its burden of proof to show that any of the limitations of claim 13 are satisfied. Additionally, the Accused Instrumentalities also do not infringe claim 13 because they do not contain or perform at least the following limitations of the claim:

- after connecting to a local area network via a network interface, identifying playback devices connected to the local area network;

- detecting a set of inputs to transfer playback from the control device to a particular playback device, wherein the set of inputs comprises: (i) a selection of the selectable option for transferring playback from the control device and (ii) a selection of the particular playback device from the identified playback devices connected to the local area network

- after detecting the set of inputs to transfer playback from the control device to the particular playback device, causing playback to be transferred from the control device to the particular playback device, wherein transferring playback from the control device to the particular playback device comprises: (a) causing one or more first cloud servers to add multimedia content to a local playback queue on the particular playback device, wherein adding the multimedia content to the local playback queue comprises the one or

more first cloud servers adding, to the local playback queue, one or more resource locators corresponding to respective locations of the multimedia content at one or more second cloud servers of a streaming content service; (b) causing playback at the control device to be stopped; and (c) modifying the one or more transport controls of the control interface to control playback by the playback device

Claim 25. The Accused Instrumentalities do not infringe claim 25 because Sonos has not met its burden of proof to show that any of the limitations of claim 25 are satisfied. Additionally, the Accused Instrumentalities also do not infringe claim 25 because they do not contain or perform at least the following limitations of the claim:

- after connecting to a local area network via the wireless communication interface, identifying playback devices connected to the local area network;

- detecting a set of inputs to transfer playback from the control device to a particular playback device, wherein the set of inputs comprises: (i) a selection of the selectable option for transferring playback from the control device and (ii) a selection of the particular playback device from the identified playback devices connected to the local area network

- after detecting the set of inputs to transfer playback from the control device to the particular playback device, causing playback to be transferred from the control device to the particular playback device, wherein transferring playback from the control device to the particular playback device comprises: (a) causing one or more first cloud servers to add multimedia content to a local playback queue on the particular playback device, wherein adding the multimedia content to the local playback queue comprises the one or more first cloud servers adding, to the local playback queue, one or more resource locators corresponding to respective locations of the multimedia content at one or more second cloud servers of a streaming content service; (b) causing playback at the control device to be stopped; and (c) modifying the one or more transport controls of the control interface to control playback by the playback device

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Dependent Claims. The Accused Instrumentalities do not infringe the dependent claims for at least the same reasons as set forth with respect to the independent claims above.

'033 Patent.

Claim 1. The Accused Instrumentalities do not infringe claim 1 because Sonos has not met its burden of proof to show that any of the limitations of claim 1 are satisfied. Additionally, the Accused Instrumentalities also do not infringe claim 1 because they do not contain or perform at least the following limitations of the claim:

- operating in a first mode in which the computing device is configured for playback of a remote playback queue provided by a cloud-based computing system associated with a cloud-based media service

- while operating in the first mode, displaying a representation of one or more playback devices in a media playback system that are each i) communicatively coupled to the computing device over a data network and ii) available to accept playback responsibility for the remote playback queue

- based on receiving the user input, transmitting an instruction for the at least one given playback device to take over responsibility for playback of the remote playback queue from the computing device, wherein the instruction configures the at least one given playback device to (i) communicate with the cloud-based computing system in order to obtain data identifying a next one or more media items that are in the remote playback queue, (ii) use the obtained data to retrieve at least one media item in the remote playback queue from the cloud-based media service; and (iii) play back the retrieved at least one media item;

- detecting an indication that playback responsibility for the remote playback queue has been successfully transferred from the computing device to the at least one given playback device

- after detecting the indication, transitioning from i) the first mode in which the computing device is configured for playback of the remote playback queue to ii) a second mode in which the computing device is configured to control the at least one given playback

1   device's playback of the remote playback queue and the computing device is no longer

2   configured for playback of the remote playback queue

3   *Claim 11.*   The Accused Instrumentalities do not infringe claim 11 because Sonos has not

4   met its burden of proof to show that any of the limitations of claim 11 are satisfied.   Additionally,

5   the Accused Instrumentalities also do not infringe claim 11 because they do not contain or perform

6   at least the following limitations of the claim:

7   - operating in a first mode in which the computing device is configured for playback of a

8   remote playback queue provided by a cloud-based computing system associated with a

9   cloud-based media service

10   - while operating in the first mode, displaying a representation of one or more playback

11   devices in a media playback system that are each i) communicatively coupled to the

12   computing device over a data network and ii) available to accept playback responsibility

13   for the remote playback queue

14   - based on receiving the user input, transmitting an instruction for the at least one given

15   playback device to take over responsibility for playback of the remote playback queue

16   from the computing device, wherein the instruction configures the at least one given

17   playback device to (i) communicate with the cloud-based computing system in order to

18   obtain data identifying a next one or more media items that are in the remote playback

19   queue, (ii) use the obtained data to retrieve at least one media item in the remote playback

20   queue from the cloud-based media service; and (iii) play back the retrieved at least one

21   media item

22   - detecting an indication that playback responsibility for the remote playback queue has

23   been successfully transferred from the computing device to the at least one given

24   playback device

25   - after detecting the indication, transitioning from i) the first mode in which the computing

26   device is configured for playback of the remote playback queue to ii) a second mode in

27   which the computing device is configured to control the at least one given playback

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device's playback of the remote playback queue and the computing device is no longer configured for playback of the remote playback queue

Claim 15. The Accused Instrumentalities do not infringe claim 15 because Sonos has not met its burden of proof to show that any of the limitations of claim 15 are satisfied. Additionally, the Accused Instrumentalities also do not infringe claim 15 because they do not contain or perform at least the following limitations of the claim:

- operating in a first mode in which the computing device is configured for playback of a remote playback queue provided by a cloud-based computing system associated with a cloud-based media service

- while operating in the first mode, displaying a representation of one or more playback devices in a media playback system that are each i) communicatively coupled to the computing device over a data network and ii) available to accept playback responsibility for the remote playback queue

- based on receiving the user input, transmitting an instruction for the at least one given playback device to take over responsibility for playback of the remote playback queue from the computing device, wherein the instruction configures the at least one given playback device to (i) communicate with the cloud-based computing system in order to obtain data identifying a next one or more media items that are in the remote playback queue, (ii) use the obtained data to retrieve at least one media item in the remote playback queue from the cloud-based media service; and (iii) play back the retrieved at least one media item

- detecting an indication that playback responsibility for the remote playback queue has been successfully transferred from the computing device to the at least one given playback device

- after detecting the indication, transitioning from i) the first mode in which the computing device is configured for playback of the remote playback queue to ii) a second mode in which the computing device is configured to control the at least one given playback

device's playback of the remote playback queue and the computing device is no longer configured for playback of the remote playback queue

Dependent Claims. The Accused Instrumentalities do not infringe the dependent claims for at least the same reasons as set forth with respect to the independent claims above.

'966 Patent

Claim 1. The Accused Instrumentalities do not infringe claim 1 because Sonos has not met its burden of proof to show that any of the limitations of claim 1 are satisfied. Additionally, the Accused Instrumentalities also do not infringe claim 1 because they do not contain or perform at least the following limitations of the claim:

- A computing device
- receiving a first request to create a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked
- based on the first request, i) causing creation of the first zone scene, ii) causing an indication of the first zone scene to be transmitted to the first zone player, and iii) causing storage of the first zone scene
- receiving a second request to create a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the third zone player is different than the second zone player
- based on the second request, i) causing creation of the second zone scene, ii) causing an indication of the second zone scene to be transmitted to the first zone player, and iii) causing storage of the second zone scene; displaying a representation of the first zone scene and a representation of the second zone scene; and while displaying the representation of the first zone scene and the representation of the second zone scene, receiving a third request to invoke the first zone scene
- based on the third request, causing the first zone player to transition from operating in the standalone mode to operating in accordance with the first predefined grouping of

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zone players such that the first zone player is configured to coordinate with at least the second zone player to output media in synchrony with output of media by at least the second zone player

Claim 9. The Accused Instrumentalities do not infringe claim 9 because Sonos has not met its burden of proof to show that any of the limitations of claim 9 are satisfied. Additionally, the Accused Instrumentalities also do not infringe claim 9 because they do not contain or perform at least the following limitations of the claim:

- receiving a first request to create a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked

- based on the first request, i) causing creation of the first zone scene, ii) causing an indication of the first zone scene to be transmitted to the first zone player, and iii) causing storage of the first zone scene

- receiving a second request to create a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the third zone player is different than the second zone player

- based on the second request, i) causing creation of the second zone scene, ii) causing an indication of the second zone scene to be transmitted to the first zone player, and iii) causing storage of the second zone scene

- displaying a representation of the first zone scene and a representation of the second zone scene

- while displaying the representation of the first zone scene and the representation of the second zone scene, receiving a third request to invoke the first zone scene

- based on the third request, causing the first zone player to transition from operating in the standalone mode to operating in accordance with the first predefined grouping of zone players such that the first zone player is configured to coordinate with at least the

1   second zone player to output media in synchrony with output of media by at least the

2   second zone player

3   *Claim 17.* The Accused Instrumentalities do not infringe claim 17 because Sonos has not

4 met its burden of proof to show that any of the limitations of claim 17 are satisfied. Additionally,

5 the Accused Instrumentalities also do not infringe claim 17 because they do not contain or perform

6 at least the following limitations of the claim:

- receiving a first request to create a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked

- based on the first request, i) causing creation of the first zone scene, ii) causing an indication of the first zone scene to be transmitted to the first zone player, and iii) causing storage of the first zone scene

- receiving a second request to create a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the third zone player is different than the second zone player

- based on the second request, i) causing creation of the second zone scene, ii) causing an indication of the second zone scene to be transmitted to the first zone player, and iii) causing storage of the second zone scene

- displaying a representation of the first zone scene and a representation of the second zone scene

- while displaying the representation of the first zone scene and the representation of the second zone scene, receiving a third request to invoke the first zone scene; and based on the third request, causing the first zone player to transition from operating in the standalone mode to operating in accordance with the first predefined grouping of zone players such that the first zone player is configured to coordinate with at least the second zone player to output media in synchrony with output of media by at least the second zone player

1   *Dependent Claims*. The Accused Instrumentalities do not infringe the dependent claims for

2   at least the same reasons as set forth with respect to the independent claims above.

3   **'885 Patent**

4   *Claim 1*. The Accused Instrumentalities do not infringe claim 1 because Sonos has not met

5   its burden of proof to show that any of the limitations of claim 1 are satisfied. Additionally, the

6   Accused Instrumentalities also do not infringe claim 1 because they do not contain or perform at

7   least the following limitations of the claim:

8   • while operating in a standalone mode in which the first zone player is configured to play

9   back media individually in a networked media playback system comprising the first zone

10   player and at least two other zone players: (i) receiving, from a network device over a

11   data network, a first indication that the first zone player has been added to a first zone

12   scene comprising a first predefined grouping of zone players including at least the first

13   zone player and a second zone player that are to be configured for synchronous playback

14   of media when the first zone scene is invoked; and (ii) receiving, from the network device

15   over the data network, a second indication that the first zone player has been added to a

16   second zone scene comprising a second predefined grouping of zone players including

17   at least the first zone player and a third zone player that are to be configured for

18   synchronous playback of media when the second zone scene is invoked, wherein the

19   second zone player is different than the third zone player

20   • after receiving the first and second indications, continuing to operate in the standalone

21   mode until a given one of the first and second zone scenes has been selected for

22   invocation;

23   • after the given one of the first and second zone scenes has been selected for invocation,

24   receiving, from the network device over the data network, an instruction to operate in

25   accordance with a given one of the first and second zone scenes respectively comprising

26   a given one of the first and second predefined groupings of zone players;

27   • based on the instruction, transitioning from operating in the standalone mode to

28   operating in accordance with the given one of the first and second predefined groupings

-18-

of zone players such that the first zone player is configured to coordinate with at least one other zone player in the given one of the first and second predefined groupings of zone players over a data network in order to output media in synchrony with output of media by the at least one other zone player in the given one of the first and second predefined groupings of zone players

Claim 8. The Accused Instrumentalities do not infringe claim 8 because Sonos has not met its burden of proof to show that any of the limitations of claim 8 are satisfied. Additionally, the Accused Instrumentalities also do not infringe claim 8 because they do not contain or perform at least the following limitations of the claim:

- while operating in a standalone mode in which the first zone player is configured to play back media individually in a networked media playback system comprising the first zone player and at least two other zone players: (i) receiving, from a network device over a data network, a first indication that the first zone player has been added to a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked; and (ii) receiving, from the network device over the data network, a second indication that the first zone player has been added to a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the second zone player is different than the third zone player

- after receiving the first and second indications, continuing to operate in the standalone mode until a given one of the first and second zone scenes has been selected for invocation

- after the given one of the first and second zone scenes has been selected for invocation, receiving, from the network device over the data network, an instruction to operate in accordance with a given one of the first and second zone scenes respectively comprising a given one of the first and second predefined groupings of zone players

- based on the instruction, transitioning from operating in the standalone mode to operating in accordance with the given one of the first and second predefined groupings of zone players such that the first zone player is configured to coordinate with at least one other zone player in the given one of the first and second predefined groupings of zone players over a data network in order to output media in synchrony with output of media by the at least one other zone player in the given one of the first and second predefined groupings of zone players

Claim 15. The Accused Instrumentalities do not infringe claim 15 because Sonos has not met its burden of proof to show that any of the limitations of claim 15 are satisfied. Additionally, the Accused Instrumentalities also do not infringe claim 15 because they do not contain or perform at least the following limitations of the claim:

- while operating in a standalone mode in which the first zone player is configured to play back media individually in a networked media playback system comprising the first zone player and at least two other zone players: (i) receiving, from a network device over a data network, a first indication that the first zone player has been added to a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked; and (ii) receiving, from the network device over the data network, a second indication that the first zone player has been added to a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the second zone player is different than the third zone player

- after receiving the first and second indications, continuing to operate in the standalone mode until a given one of the first and second zone scenes has been selected for invocation

- after the given one of the first and second zone scenes has been selected for invocation, receiving, from the network device over the data network, an instruction to operate in

1   accordance with a given one of the first and second zone scenes respectively comprising

2   a given one of the first and second predefined groupings of zone players

3   • based on the instruction, transitioning from operating in the standalone mode to

4   operating in accordance with the given one of the first and second predefined groupings

5   of zone players such that the first zone player is configured to coordinate with at least

6   one other zone player in the given one of the first and second predefined groupings of

7   zone players over a data network in order to output media in synchrony with output of

8   media by the at least one other zone player in the given one of the first and second

9   predefined groupings of zone players

10   *Dependent Claims*. The Accused Instrumentalities do not infringe the dependent claims for

11   at least the same reasons as set forth with respect to the independent claims above.

12   **FIRST SUPPLEMENTAL RESPONSE:**

13   Subject to and without waiving the foregoing General and Specific objections, Google

14   further responds, as follows:

15   Google objects to the term "Accused Instrumentalities" to the extent it purports to include

16   instrumentalities Sonos has not identified by name or model number in its infringement contentions,

17   or for which Sonos has not provided Google with its infringement theories. For example, Google

18   objects to the term to the extent it purports to include the Podcast application, which Sonos is no

19   longer accusing of infringement. Google also objects to the term to the extent it purports to include

20   the Spotify application, which Sonos is no longer accusing of infringement.

21   Sonos's infringement contentions are also incoherent, vague, and ambiguous, and it is

22   accordingly difficult, if not impossible, for Google to understand Plaintiff's theories of

23   infringement. Google has detailed issues in Sonos's infringement contentions in correspondence

24   among the parties, including its November 2, 2021 letter, and Sonos has continued to fail to remedy

25   them. Sonos has also vaguely asserted that certain terms should be construed as "plain and ordinary

26   meaning," while at the same time refusing to explain what it contends is the plain and ordinary

27   meaning of the term. Google has accordingly used its own constructions of the disputed terms in

28

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1 addressing this Interrogatory, as well as those adopted by the Texas court prior to transfer. Google

2 reserves the right to supplement its response after the Court renders its claim constructions.

3   ***Representative Products***

4   As an initial matter, Sonos improperly lumps together a number of different YouTube

5 applications. Sonos does not provide notice of its theory of infringement for each YouTube

6 application, and Sonos has not shown that any of these products are representative of

7 another. Sonos's patchwork analysis pulling together numerous different YouTube applications

8 without any showing that they operate in the same way is incomplete and fails to meet Sonos's

9 burden to show that each of the accused products infringes the Asserted Claims of the Asserted

10 Patents as a matter of law. *L & W, Inc. v. Shertech, Inc.*, 471 F.3d 1311 (Fed. Cir. 2006) (holding

11 plaintiff failed to demonstrate infringement because "Shertech cannot simply 'assume' that all of L

12 & W's products are like the one Dr. Holmes tested and thereby shift to L & W the burden to show

13 that is not the case"). The different YouTube applications support different features and

14 functionalities, including with respect to the functionality Sonos has accused. By way of example

15 only, Sonos accuses functionality related to YouTube's AutoPlay feature (*e.g.,* the use of an

16 "upNextVideoID"), which is a feature that is not available in certain YouTube Applications (e.g,

17 YouTube Music). It is Sonos, not Google's, burden to show *each* YouTube application infringes,

18 and Sonos's attempt to lump together these various applications is insufficient to meet its burden.

19   ***CIA***

20   Further, Google does not infringe because the parties' 2013 Content Integration

21 Agreement ("CIA") applies to Sonos's claims. Sonos's infringement allegations for the '615 and

22 '033 patents appear to be directed at Google technologies that arise out of or are related to work

23 done by Google as part of the Google-Sonos collaboration. For example, Sonos has referred to the

24 '615 and '033 patents as "cloud queue patents." Dkt. 32-1 at 17:3-8. At the same time that the

25 Content Integration Agreement was signed, in November 2013, Google told Sonos that it was

26 considering "a more cloud queue centric model" for certain aspects of development related to the

27 collaboration. "Tad" Coburn, then a Principal Software Engineer at Sonos, acknowledged Google's

28 idea as "very interesting," while noting that it "will definitely complicate things." Dkt. 33 at 23-

24.   Google went on to develop its technology, and the details of Google's development work were known to Sonos at the time in connection with the parties' collaboration.   *See, e.g.,* GOOG-SONOSWDTX-00037146-00037164;   GOOG-SONOSWDTX-00043682-00043700;   GOOG-SONOSWDTX-00051100-00051118;   GOOG-SONOSWDTX-00037042-00037080;   GOOG-SONOSWDTX-00043637-00043675;   GOOG-SONOSWDTX-00051055-00051093;   GOOG-SONOSWDTX-00036998-00037003;   GOOG-SONOSWDTX-00043676-00043681;   GOOG-SONOSWDTX-00051094-00051099;   GOOG-SONOSWDTX-00037141-00037145;   GOOG-SONOSWDTX-00037004-00037008;   GOOG-SONOSWDTX-00037165-00037177;   GOOG-SONOSWDTX-00050985-00050997;   GOOG-SONOSWDTX-00037231-00037242;   GOOG-SONOSWDTX-00050422-00050433;   GOOG-SONOSWDTX-00040342-00040382;   GOOG-SONOSWDTX-00043736-00043738;   GOOG-SONOSWDTX-00051461-00051463;   GOOG-SONOSWDTX-00037178-00037180;   GOOG-SONOSWDTX-00037313-00037315;   GOOG-SONOSWDTX-00037181-00037217;   GOOG-SONOSWDTX-00037316-00037352;   GOOG-SONOSWDTX-00037220-00037222;   GOOG-SONOSWDTX-00037355-00037357;   GOOG-SONOSWDTX-00037223; GOOG-SONOSWDTX-00037358; GOOG-SONOSWDTX-00037224-00037230. Sonos also understood – and acknowledged at the time – that Google would be using its technology not just in connection with Sonos devices but also in connection with other devices.

Nevertheless, Sonos has accused Google of infringing the '615 and '033 patents in violation of the CIA. Specifically, the CIA provides that work done by or on behalf of Google as part of the collaboration – and any intellectual property rights arising out of or related to that work – would be the sole and exclusive property of Google:

> 3.4. Ownership of Service Provider Intellectual Property Rights. The Music Service, the Provider Developments (as defined below), and any and all intellectual property rights arising from or related thereto are and shall remain the sole and exclusive property of Service Provider. Sonos will not claim for itself or for any third party any right, title, interest or licenses to the Music Service or Provider Developments, except for the limited license granted herein. The Provider Developments consist of any and all development work done by or on behalf of Service Provider in creating the Integrated Service Offering, and any code or other materials owned or controlled by Service Provider and included by Service Provider in the Integrated Service Offering, excluding the Licensed Software, under the terms of the Development Agreement.

1 CIA § 3.4. The "intellectual property rights" described in Section 3.4 cover work done by

2 or on behalf of Google as part of the collaboration, including but not limited to work done by or on

3 behalf of Google on the functionality that Sonos accuses of infringing the '615 and '033 patents, as

4 well as work arising from or related to such work.

5 <u>**'615 Patent & '033 Patent**</u>

6 ***Alleged Direct Infringement By Google***

7 Sonos's allegation of direct infringement by Google are the same for the '615 and '033

8 patents in its infringement contentions. Accordingly, Google addresses the allegations together in

9 this response.

10 Sonos accuses Google of directly infringing by "offering to sell, selling, and/or importing

11 into the United States its "Pixel" brand of Cast-enabled computing devices, as well as its Cast-

12 enabled displays, in violation of 35 U.S.C. § 271(a)." However, Sonos has not provided any

13 evidence that Pixel devices include the accused YouTube applications or Google Play Music

14 applications that Sonos contends are necessary for infringement when offered for sale, sold or

15 imported in the United States.

16 Sonos also purports to identify numerous third-party devices in an Appendix 1 to the

17 infringement contentions. Sonos has not provided any evidence that Google offers to sell, sells or

18 imports into the United States any or all of the devices in Appendix 1. Nor has Sonos shown that

19 any or all of these devices are even capable of including the accused YouTube and Google Play

20 Music application. For example, Sonos has not provided any evidence that Google offers to sell,

21 sells or imports into the United States any Arirang (North Korean) devices, or Yota (Russian device),

22 or that these North Korean and Russian devices are even capable of including the accused YouTube

23 and Google Play Music applications.

24 Sonos further alleges that Google infringes the asserted claims "by virtue of installing one

25 or more of the accused Cast-enabled apps onto Cast-enabled computing devices and installing Cast-

26 enabled software (*e.g.*, firmware updates and/or Cast-enabled apps) onto Cast-enabled displays

27 within the United States, which constitutes 'mak[ing]' an infringing device under 35 U.S.C. §

28 271(a)." But Sonos has not provided any evidence that Google installs the accused applications

1   onto the accused computing devices. Nor has Sonos shown that any updates (*e.g.*, firmware updates)

2   would include the accused functionality. Accordingly, Sonos has not shown any "making" of an

3   infringing device by Google.

4   Sonos further alleges that Google infringes the asserted claims "by virtue of testing Cast-

5   enabled computing devices and testing Cast-enabled displays within the United States, which

6   constitutes 'us[ing]' an infringing device under 35 U.S.C. § 271(a)." Again, Sonos has failed to

7   produce any evidence or identify any instance in which Google has tested or used the devices in the

8   manner that is accused of infringing the asserted '615 patent. Nor has Sonos provided any evidence

9   that the damages theories that it has disclosed in its Damages Contentions are tied to any internal

10 use or testing by Google.

11   Sonos additionally alleges that Google infringes "certain asserted claims of the '615 and

12 '033 Patents (*e.g.*, claims 13-15, 18-21, and 23-24 of the '615 Patent and claims 12-13 of the '033

13 Patent)" because allegedly "Google operates servers in the United States that host Cast-enabled apps

14 for download onto Cast-enabled computing devices and/or Cast-enabled software (*e.g.*, firmware

15 and/or Cast-enabled apps) for download onto Cast-enabled displays." The claims at issue recite a

16 "computer-readable media having instructions encoded therein" that when executed perform certain

17 functional steps. Sonos has not provided any evidence that Google's servers have performed the

18 method steps in these claims, or that they are capable of doing so. In fact, Google's computer servers

19 do not include a computer readable media with instructions that can be executed to perform the steps

20 of the claims. For example, Google's servers are not the claimed "computing device" that is

21 "operating in a first mode in which the computing device is configured for playback of a remote

22 playback queue" ('033 patent) or the claimed "control device" ('615 patent), do not connect to a

23 local area network, do not have a graphical user interface or display, do not allow selection of a

24 particular playback device, cannot transfer playback of a local or remote playback queue, cannot

25 display or modify transport controls, and cannot play or stop playback of multimedia content. Sonos

26 has also accused computing devices and playback devices that are not provided by Google such that

27 Google would not directly infringe these claims. Accordingly, Sonos has failed to show that Google

28 directly infringes these claims. *See Deep9 Corp. v. Barnes & Noble, Inc.*, No. C11-0035JLR, 2012

1   WL 4336726 (W.D. Wash. Sept. 21, 2012) (computer readable media claim not infringe where

2   accused infringer did not provide the "common communications channel" limitation because the

3   product guide and terms of service specified "that it is the user's choice as to what internet service

4   provider to use").

5   ***Alleged Indirect Infringement By Google***

6   Google contends that it has not (1) contributed to the direct infringement of the Asserted

7   Claims (contributory infringement); or (2) induced any third party to infringe the Asserted Claims

8   directly (induced infringement). Initially, this Court recently granted Google's motion to dismiss

9   Sonos's indirect infringement claims with respect to the '033, '966, and '885 patents because Sonos

10   has not shown that Google had notice of the patents pre-suit, a specific intent to infringe those

11   patents, or that there were components with no substantial non-infringing uses. Thus, Google

12   contends that Sonos's indirect infringement allegations for at least the '033, '966 and '885 patent

13   are deficient for at least these reasons and have been dismissed from the case.

14   Additionally, contributory infringement requires that an alleged infringer, with knowledge

15   of the patent, sells, offers to sells, and/or imports into the U.S. a material part or component of the

16   invention, knowing that it is especially made or adapted for infringement, and not a staple article or

17   commodity suitable for substantial non-infringing use. 35 U.S.C. § 271(c). "For purposes of

18   contributory infringement, the [substantial noninfringing use] inquiry focuses on whether the

19   accused products can be used for purposes other than infringement." *In re Bill of Lading*

20   *Transmission and Processing Sys. Patent Litig.*, 681 F.3d 1323, 1338 (Fed. Cir. 2012). Here,

21   Accused Products, and components thereof, have substantial non-infringing uses. For example, the

22   '033 and '615 patents claim a "computing device," which Sonos has mapped to a smartphone, tablet,

23   or other computing device. The accused computing devices can be used for many functionalities

24   that are not even related to playback of media, such as making phone calls, browsing the Internet,

25   sending email communications, and numerous other functionalities. Sonos also allege that Google

26   infringes the Asserted Patents vis-à-vis the casting functionality in the YouTube and Google Play

27   Music applications, but each application can be used without the casting functionality, and Sonos

28

1 has failed to show an application is the claimed component. Thus, any and all components of the

2 Accused Products have substantial non-infringing uses.

3   With respect to induced infringement, Google has not, with knowledge of the patent and

4 infringement thereof, actively induced its customers or end-users to infringe the Asserted Patents

5 with specific intent to encourage infringement. 35 U.S.C. § 271(b); *see Commil USA, LLC v. Cisco*

6 *Sys., Inc.*, 135 S. Ct. 1920, 1928 (2015). Sonos has not identified any evidence that Google actively

7 induced customers or end-users to infringe or that Google did so with the specific intent to encourage

8 infringement. There is no evidence that Google knew of the alleged infringement; in fact, Sonos

9 admits that Google did not have knowledge of the '033, '966, and '885 patents until just hours

10 before the filing of the action. Accordingly, there is no evidence suggesting that Google took actions

11 with the specific intent to encourage any infringement.

12   Google provides a further response on an element by element basis below for each of the

13 Asserted Patents.

14   ***Alleged Infringement Under Section 271(f)***

15   In order to be liable for infringement under § 271(f), a defendant must "suppl[y]"

16 components of a patented invention "in or from the United States" with the intent that they will be

17 "combined outside of the United States in a manner that would infringe the patent if such

18 combination occurred within the United States." *See* § 271(f)(1)-(2). Google does not supply

19 components of a patented invention in or from the United States in this fashion.

20   In particular, as applied to software, the Supreme Court has held that a "component" must

21 be something physical, and since "[a]bstract software code is an idea without physical embodiment

22 .   .   .   it   does   not   match   §   271(f)'s   categorization: 'components'   amenable   to

23 'combination.'" *Microsoft Corp. v. AT&T Corp.*, 550 U.S. 437, 447-49 (2007). Following

24 *Microsoft*, district courts have dismissed § 271(f) claims centered on software in the abstract. *See*

25 *e.g.*, *People.ai, Inc. v. SetSail Techs., Inc.*, No. C 20-09148 WHA, 2021 WL 2333880, at *6 (N.D.

26 Cal. June 8, 2021) (Alsup, J.) ("software in the abstract can be neither a component, as required

27 by Section 271(f)"); *see also CIF Licensing, LLC v. Agere Sys. Inc.*, 727 F. Supp. 2d 337, 352 (D.

28 Del. 2010) (granting motion for judgment as a matter of law to defendant on 271(f) because "no

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1 reasonable jury could infer . . . that Defendant's software was formatted as a computer-readable

2 copy, rather than abstract software code").

3   Sonos has accused certain Google applications of infringing the '615 and '033

4 patents. However, Google does not supply any physical embodiment associated with those

5 applications "in or from the United States." Accordingly, because the Supreme Court has held that

6 a "component" must be something physical and "[a]bstract software code is an idea without physical

7 embodiment" (*Microsoft*, 550 U.S. at 447-49), Section 271(f) does not apply.

8   **'615 Patent**

9   ***YouTube Applications***

10   **'615 Patent, Claim 13**

11   "**after detecting the set of inputs to transfer playback from the control device to the**

12 **particular playback device, causing playback to be transferred from the control device to the**

13 **particular playback device**." Sonos's contentions fails to demonstrate that this limitation is

14 satisfied. The YouTube application running on the control device does not cause playback to be

15 transferred from the control device to the particular playback device. As Sonos's own contentions

16 acknowledge, at most, the YouTube application may transmit a "setPlaylist" message "to one or

17 more MDx servers." Sonos's Infringement Contention, Ex. A at 37. The MDx servers then generate

18 a further set Playlist message "requesting the screen to start playing the video identified by the

19 videoID from the currentTime." *See, e.g.,* GOOG-SONOSWDTX-00041650 at 57. Thus, it is the

20 MDx server, not the control device, that causes playback to be transferred to the particular playback

21 device.

22   "**wherein transferring playback from the control device to the particular playback**

23 **device comprises: causing one or more first cloud servers to add multimedia content to a local**

24 **playback queue on the particular playback device,** wherein adding the multimedia content to

25 **the local playback queue comprises the one or more first cloud servers adding, to the local**

26 **playback queue, one or more resource locators corresponding to respective locations of the**

27 **multimedia content at one or more second cloud servers of a streaming content**

28 **service.**" Sonos's contentions fails to demonstrate that this limitation is satisfied for many reasons.

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1   For example, Sonos appears to contend that audio alone may be the claimed "multimedia

2 content." But the term "multimedia" has been construed as having its "plain meaning." The plain

3 meaning of "*multi*media" requires multiple forms of media (*e.g.*, audio and video). *See, e.g.,*

4 *Multimedia,* The Computer Glossary (9th edition, 2001), *Multimedia,* Microsoft's Computer

5 Dictionary (5th edition, 2002). Because audio alone is a single, not multiple, media, Sonos's

6 contentions that rely upon audio alone fail to satisfy this limitation. Thus, casting audio to a speaker

7 for playback would not satisfy the claims of the '615 patent.

8   As another example, Sonos has failed to identify a "local playback queue on the particular

9 playback device." Without any "local playback queue" to point to, Sonos is relegated to presenting

10 three different theories for this limitation. Specifically, Sonos alleges as follows:

11   Sonos contends that that (i) each of Google's data variables
currentVideoIdDeprecated and currentWatchEndPoint.videoID

12   amounts to the claimed "local playback queue" with the "videoID" of
the current media item amounting to "an identifier of the multimedia

13   content," (ii) alternatively, one or both of Google's data variables
currentVideoIdDeprecated and currentWatchEndPoint.videoID in

14   combination with Google's data variable upNextVideoID amounts to
the claimed "local playback queue" with the "videoID" of the current

15   media item and the "videoID" of the next media item each amounting
to "an identifier of the multimedia content," and (iii) alternatively,

16   Google's "WatchNextResponse" data structure by itself (or in
combination with one or more of the aforementioned data variables)

17   amounts to the claimed "local playback queue" with the "videoID" of
one or more of the current, previous, and/or next media item

18   amounting to "an identifier of the multimedia content."

19 *See, e.g.,* Infringement Contention, Ex. A at 107. None of these theories satisfy the claims under

20 Google's or Sonos's proposed construction. Google's accused YouTube application does not use a

21 "local playback queue," it uses a cloud queue. Sonos's three theories merely point to data that

22 relates to entries in the queue that is stored on the MDx server. While a client device may choose

23 to retrieve and buffer (or cache) data related to the queue that is stored in the cloud to optimize

24 playback (*e.g.*, the next videoID), that data is not the ordered list of multimedia items selected by

25 the user for playback. Thus, Sonos's three theories fail for at least the reason that Google maintains

26 a cloud queue, not a local playback queue.

27   Specifically, as proposed by Google, a "playback queue" is "an ordered list of multimedia

28 items that is selected by the user for playback." In devices running the accused YouTube application

1   the ordered list of multimedia items that is selected by the user for playback is stored on the MDx

2   server. It is not stored locally on the client device running the YouTube application. In particular,

3   Google's accused YouTube applications use Version 3 of the MDx protocol. This version of MDx

4   employs a "cloud queue." The "cloud queue," as its name implies, is not "stored on the particular

5   playback device" and is not a "local" playback queue. Indeed, Google's documents explain that one

6   of the differences between Version 2 and Version 3 of the MDx protocol is that "the queue is now

7   maintained on the MDx server and *not* the TV." *See, e.g.,* GOOG-SONOSWDTX-00041650 at 55

8   (emphasis added); GOOG-SONOSWDTX-00039798 ("When Casting, *the queue is persisted as a*

9   *server-side "remote queue*"), GOOG-SONOSWDTX-00039799 ("YouTube Music clients can

10   Cast to Living Room devices. In comparison to the 1st party case where t*he queue is a client-side*

11   *construct, the Casting use case stores the queue in YouTube servers as a 'Remote Queue'*

12   *playlist*."), GOOG-SONOSWDTX-00039800 ("The *MDx Session Server manages the 'Remote*

13   *Queue' playlist* as well as the broader multi-device experience while Casting."); *see also* GOOG-

14   SONOSWDTX-00039889,   GOOG-SONOSWDTX-00039916,   GOOG-SONOSWDTX-

15   00040156,   GOOG-SONOSWDTX-00040287,   GOOG-SONOSWDTX-00040397,   GOOG-

16   SONOSWDTX-00041491, GOOG-SONOSWDTX-00041525, GOOG-SONOSWDTX-00041743.

17   The source code for the accused YouTube applications confirms that the playback queue is

18   stored remotely on the MDx server, not locally on the playback device. For example, the MDx

19   server (also called a "Lounge Server") includes a "SharedQueue.java" file that defines the

20   operations of the playback queue and a file "LoungeSharedQueue.java" that implements the

21   SharedQueue. The SharedQueue stored on the MDx server is a "playback queue" and includes the

22   characteristics that one skilled in the art would understand to define a queue.

23   For example, a POSITA would understand that a "playback queue" is an ordered list of

24   multimedia items. The SharedQueue stored on the MDx includes an ordered list of multimedia

25   items. Indeed, at lines 32 to 35 of SharedQueue.java "List<VideoID> getVideoIds()" returns an

26   ordered list of VideoIds for playback, thereby demonstrating that the SharedQueue includes an

27   "ordered list" of videoIDs. Similarly, lines 68-72 of SharedQueue.java returns a "list" of

28   "QueueItems," which are defined in the file QueueItem.java at line 14 to 17 as a VideoID and its

1   associated data (namely, a "CredentialTransferToken," and a "DeviceType").   Relatedly, at lines

2   28 to 30 "int getIndex(VideoID id) returns the index of the queue item corresponding to a

3   videoID. The ShareQueue in the list is "zero indexed," meaning that [0] returns the first item in the

4   list, [1] returns the second item in the list, [2] returns the third item in the list and so on. In other

5   words, the SharedQueue includes an indexed list of videoIDs.

6   As another example, a person of skill in the art would understand that a queue can be edited

7   and managed, with items added or removed from the queue. The SharedQueue can also be edited

8   and managed. *See also* '615 patent at 16:25-31 ("queue that the user is editing/managing in the third

9   party application"). For instance, at lines 14-20 of the file SharedQueue.java the command

10 "add(QueueItem queueItem)" adds a QueueItem (which contains a videoIDs) to the end of the

11 queue, and the command "addAll(List<QueueItem> queueItems)" adds a list of QueueItems (which

12 contains a list of videoIDs) to the SharedQueue. Further, items in the SharedQueue can be removed

13 (SharedQueue.java at lines 53-61), added to the SharedQueue at a given position (SharedQueue.java

14 at lines 38-41), and moved "forward or backward" (SharedQueue.java at lines 47-51). Thus, Google

15 implements a cloud queue, not a "local playback queue."

16   Each of Sonos's theories fails for other reasons as well. Sonos's first theory is that the

17 currentVideoIdDeprecated and currentWatchEndPoint.videoID amounts to the claimed "local

18 playback queue." Sonos has not identified any evidence that these variables are stored on the

19 playback   device   as   an   ordered   list.   In   fact,   currentVideoIdDeprecated   and

20 currentWatchEndPoint.videoID are both identifiers that relate to the currently playing video (with

21 currentVideoIdDeprecated having been deprecated in favor of the currentWatchEndPoint.videoID)–

22 they are not identifiers for the current and next video. A queue is not a variable that is populated

23 with only a single, fixed item: the current videoID. Rather, a queue is an ordered list, which may

24 be populated with zero, one or more multimedia items. Nor has Sonos pointed to any evidence that

25 these   variables   are   used   for   playback.   For instance, the currentVideoIdDeprecated   and

26 currentWatchEndPoint.videoID variables that Sonos identifies are *not* used for playback. They are

27 instead used to *identify* what is currently being played, as part of status updates, but not to request

28 or access media for playback (*see* remote.ts). Thus, neither of these items can form a *playback*

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1   queue. Moreover, these two variables are not the list of multimedia items selected by the user—

2   they are, at best, data that relates to entries in the user-created queue of multimedia items that is

3   stored in the cloud.

4   Sonos's second theory is similarly deficient. In this theory, Sonos again points to the

5   currentVideoIdDeprecated and currentWatchEndPoint.videoID, but this time adds into the mix the

6   variable upNextVideoID. The addition of the upNextVideoID does not cure the deficiencies

7   identified in connection with Sonos's first theory, and the theory thus fails for all the reasons

8   discussed above. Moreover, Sonos's expert, Dr. Schmidt, also admitted that storing multiple data

9   variables in memory, including a variable for the current and next video, would not satisfy Google's

10 construction of "local playback queue" because the variables are "not stored as an 'ordered list.'" 2-

11 11-2022 Schmidt Decl., ¶88. Additionally, the upNextVideo variable is used only for playing the

12 next "autoplay" video, if any. An autoplay video is a recommended video that is selected by the

13 MDx server after the MDx playlist is emptied—it is not part of the playlist and is not "selected by

14 the user." If there is at least one video that would follow the currently playing video in the playlist

15 on the MDx server, the upNextVideoId is immediately ignored and the upNextVideoId variable,

16 because it is a variable local to the handleWatchNextLoaded() function, is deallocated when the

17 handleWatchNextLoaded() function returns. Thus, far from a local playback queue, the

18 upNextVideoID is a variable that is used once the user's playlist on the MDx server is

19 emptied. Further, the autoplay feature is *not* used with all YouTube applications. For example, the

20 YouTube Music application does not use autoplay, and thus Sonos's second theory cannot show

21 infringement by YouTube Music.

22   Sonos's third theory relies upon the WatchNextResponse. But the WatchNextResponse is

23 not a "local playback queue" and does not store "an ordered list of multimedia items that is selected

24 by the user for playback." The ordered list of multimedia items that is selected by the user for

25 playback is stored on the MDx server, as already explained. Far from being a "local playback

26 queue," the WatchNext Response is used to populate much of the UI (including metadata,

27 comments, playlist panel, and advertisements, etc.).

28

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Sonos contends that the term "playback queue" should be given its "plain and ordinary" meaning. Google's construction of "playback queue," however, is the plain meaning, and a "local playback queue on the particular playback device" is a playback queue in a data structure within the particular playback device. Thus, Sonos has failed to demonstrate that the accused YouTube application includes a local playback queue on the particular playback device under the "plain meaning."

Moreover, the variables and WatchNextResponse that Sonos points to are not a local playback queue under any reasonable interpretation of "plain meaning." A person of skill in the art would understand that a playback queue is stored in a data structure by linking together different multimedia items in a particular order using linked lists, arrays, vectors, or other well-known data structures. The videoIDs and WatchNext structure that Sonos accuses are not a "queue," but rather information related to populating the UI, including numerous items of information such as metadata, video owner, playlist panel, suggested videos, and so on). At most, the WatchNextResponse includes a videoID related to the next media in the MDx queue that is retrieved and buffered (or cached) to optimize playback and provide status updates. Persons of skill in the art would recognize that this buffered data serves a very different purpose from a queue and are not the queue themselves. Buffers can be used to quickly cache information such that access to it is more immediate than to a resource in a more remote portion of the storage hierarchy. Queues, in contrast, are created to organize and store (in this context) multimedia items for playback. 2-11-2022 Kyriakakis Declaration, ¶52. These are distinct concepts and a person of skill in the art would not confuse or conflate them. Indeed, a queue data structure persists beyond the playback of the current or next song, unlike the variables that Sonos is accusing. The action of buffering a variable for the currently playing or next song in a cloud queue on a playback device does not create a "local playback queue" as claimed. Moreover, as explained earlier, a person of skill in the art would understand that a queue can be edited and managed, with items added or removed from the queue, while the variables and WatchNextResponse that Sonos identifies are static items that do not permit such queue manipulation.

1   Even if Sonos had pointed to a "local playback queue" (it has not), Sonos has not

2   demonstrated that transferring playback "caus[es] one or more first cloud servers to add multimedia

3   content to a local playback queue on the particular playback device, wherein adding the multimedia

4   content to the local playback queue comprises the one or more first cloud servers adding, to the local

5   playback queue, one or more resource locators corresponding to respective locations of the of the

6   multimedia content at one or more second cloud servers of a streaming content service."

7   Sonos's current contentions point only to videoIDs being added to the local playback

8   queue. A videoID is not the "multimedia *content*" under the plain meaning of the claim language. A

9   person of skill in the art would understand that "content" is the multimedia file or the information

10   and data within that file. A videoID is, at best, a unique identifier for the content. Indeed, the claim

11   language recites that the playback device must "play back the multimedia content." A person of

12   skill in the art would understand that a playback device cannot play back a videoID because it does

13   not include audio, video or any other content. Claim 13 also states that a "resource locator

14   correspond[s] to the respective locations of the multimedia content at one or more second cloud

15   servers," thereby distinguishing the "resource locator" (which Sonos has identified as a videoID)

16   from the "content." Relatedly, dependent claim 20, which depends on claim 13, recites "wherein

17   causing the one or more first cloud servers to add multimedia content to the local playback queue

18   on the particular playback device comprises causing an identifier of the multimedia content to be

19   added to the local playback queue," thereby distinguishing an identifier from the multimedia content

20   itself. Sonos's other patents also distinguish storing a "content identifier" in the playback queue

21   from storing the content itself. *See, e.g.,* U.S. Patent No. 9,674,587 ("even if the playback queue is

22   not reachable by the device, it may be desirable to store the content, content identification, and/or

23   content pointer on the device until a time when the playback queue can be reached.").

24   Moreover, a videoID also is also not a "resource locator corresponding to respective

25   locations of the multimedia content at one or more second cloud servers of a streaming content

26   service." Google has proposed that the term "resource locator" means an "address of a resource on

27   the Internet." As mentioned, a videoID is an identifier—it is not an address. Sonos does not appear

28   to dispute that a videoID is not a resource locator under Google's construction. Sonos has also

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1   failed to show the claimed "resource locator" under its own construction. Even if a resource locator

2   could be an identifier (it cannot), the identifier does not "correspond[] to respective locations of the

3   multimedia content at one or more second cloud servers of a streaming content service." Indeed, a

4   person of skill in the art would understand that the server that stores the content cannot be identified

5   by the videoID. In fact, in the accused systems after a videoID is received it must subsequently be

6   mapped to a server from which to request the content. The same videoID may be mapped to

7   different servers depending on various conditions and circumstances. In other words, the location

8   of the multimedia contention from which the alleged playback device should retrieve the content is

9   not even known at the time the videoID is received.

10   Sonos's reliance on "URLs" is also misplaced. Sonos has not provided any evidence that

11   the URLs are stored in a "local playback queue." Indeed, as previously mentioned, Sonos contends

12   that   (1)   each   of   Google's   data   variables   currentVideoIdDeprecated   and

13   currentWatchEndPoint.videoID amounts to the claimed "local playback queue," (2) one or both of

14   Google's   data   variables   currentVideoIdDeprecated   and   currentWatchEndPoint.videoID   in

15   combination with Google's data variable upNextVideoID amounts to the claimed "local playback

16   queue," or (3) a "WatchNextResponse" is the claimed "local playback queue." Sonos has not shown

17   that the accused data variables and WatchNext response that Sonos contends are a "local playback

18   queue" also store one or more URL.

19   Additionally, Google does not infringe Claim 13 because Sonos has not shown Google sells,

20   offers to sell, or imports into the United States a "a control device to implement a method," e.g., the

21   control device "causing a graphical interface to display a control interface including one or more

22   transport controls to control playback by the control device," that contains the accused application

23   and functionality.

24   Sonos has also failed to show that the claims are satisfied under the doctrine of equivalents

25   ("DoE").

26   Initially, Sonos's DoE analysis is conclusory and does not cite to any evidence or provide

27   an explanation that might support a finding of infringement under DoE. Thus, Sonos has failed to

28

1   meet its burden under DoE. To the extent Sonos is permitted to expand upon its DoE analysis or

2   provide additional evidence or explanation, Google reserves the right to supplement its response.

3   Moreover, Sonos's DoE arguments cannot prevail because they read the "local playback

4   queue" limitation out of the claims in order to accuse YouTube's Cloud Queue. *See Duncan*

5   *Parking Technologies, Inc. v. IPS Group, Inc.*, 2019 WL 386013, *8-*9 (Fed. Cir. 2019) ("The

6   doctrine of equivalents cannot be used to erase meaningful structural and functional limitations of

7   the claim on which the public is entitled to rely in avoiding infringement."); *Augme Technologies,*

8   *Inc. v. Yahoo! Inc.,* 755 F.3d 1326, 1335 (Fed. Cir. 2014) ("As construed, embedded code does not

9   include externally linked code. Augme's arguments that the Combined RMX Module is equivalent

10 to the embedded first code module are essentially identical to its claim construction arguments:

11 namely that linked code can fall within the definition of embedded code. No reasonable jury could

12 find equivalence here because doing so would require a determination that embedded code is

13 substantially the same as linked code—the very thing that the construction of 'embedded' excludes.

14 '[T]he concept of equivalency cannot embrace a structure that is specifically excluded from the

15 scope of the claims.' While we have recognized that literal failure to meet a claim limitation does

16 not necessarily constitute a 'specific exclusion,' we have found 'specific exclusion' where the

17 patentee seeks to encompass a structural feature that is the opposite of, or inconsistent with, the

18 recited limitation."). The accused YouTube applications' use of a Cloud Queue stored on the MDx

19 server reflects a substantially different approach to the use of a "local playback queue." Put another

20 way, a "local playback queue" and a "remote playback queue" are fundamentally different—they

21 are not, as Sonos contends, "insubstantial differences."

22   Sonos's DoE arguments fail for additional reasons as well. For example, Sonos appears to

23 acknowledge that the control device does not "directly cause a 'first cloud server' to add a 'resource

24 locator' to the 'local playback queue on the particular playback device." Indeed, in Google's system

25 the transmission of a setPlaylist message does not cause URLs to be added to the playback device,

26 and thus Google does not literally infringe. Sonos nevertheless argues that the "resource locator"

27 limitation of the claim is satisfied under DoE because allegedly the setPlaylist message "***indirectly***

28 causes one or more cloud servers to add one or more URLs for a media item to a Cast-enabled media

1   player's memory (constituting the "local playback queue")." Initially, Sonos has not demonstrated

2   that the accused setPlaylist message "indirectly" causes the addition of one or more URLs. Indeed,

3   Sonos's contentions fail to describe how URLs are fetched and added to the alleged

4   queue. Moreover, Sonos's conclusory DoE analysis fails to demonstrate that the difference between

5   the claims and Google's accused devices is an insubstantial difference or that the difference meets

6   the function/way/result test. Indeed, Google's products do not perform substantially the same

7   function, in substantially the same way to achieve substantially the same result. The claimed

8   "invention" contemplates a system in which transferring playback to a playback device causes one

9   or more resource locators that correspond to the location of the multimedia content for playback to

10 be added to a local playback queue. However, such a simplistic system would be unworkable for a

11 system the size of YouTube–it could not scale for the large volume of users that YouTube

12 supports. In the accused YouTube system, rather than adding a URL at the time of transfer, a

13 videoID is added. URLs are later retrieved at the time of playback, which involves separate

14 processes that, among other things, mapping the playback device to the appropriate CDN server

15 based on various factors, including network latency and system load. Moreover, the YouTube

16 system may include different resource locators for different chunks of the media item or formats. In

17 other words, unlike the claims, which contemplate a static locator for the multimedia content, in the

18 YouTube system there is no URL that can be considered a single resource locator for the multimedia

19 content. These various differences are substantial differences from the simplistic system in the '615

20 patent because the simplistic system in the '615 patent would not scale. Thus, Google does not

21 infringe under the DoE at least because it does not perform substantially the same function (*e.g.*, at

22 least because the original function in the claim provides a static URL as part of the transfer, while

23 the transfer in the accused system provides a videoIDs), in substantially the same way (*e.g.*, at least

24 because the original function in the claim receives the URL as part of the transfer, but the accused

25 systems receives a URL as part of playback and after mapping the playback device to an CDN server

26 based on various criteria), to achieve substantially the same result (*e.g.*, at least because the original

27 function receives a static URL identifying the location of the multimedia content, but in the accused

28 systems there is no URL that can be considered a single resource locator for the multimedia content).

1   Sonos further acknowledges that in the accused YouTube systems there is not a single data

2   structure that stores an ordered list of multimedia items for playback. Nevertheless, Sonos contends

3   that storing multimedia items in multiple, individual data variables is an "insubstantial difference"

4   that would satisfy the claims under DoE. Sonos's DoE argument eliminates the requirement of

5   a "playback queue" from the claims and essentially equates the term "playback queue" with

6   "memory." It also eliminates the distinction between a "remote playback queue" and a "local

7   playback queue," which, as explained above, are fundamentally different. Indeed, Sonos's patents

8   distinguish between a "local playback queue" ('615 patent) and a "remote playback queue" ('033

9   patent), and indicate that the distinction between these two is not whether multimedia is stored in

10   memory of the playback device. Indeed, the claims of the '033 patent recite that playback of a

11   "remote playback queue" may involve "communicat[ing] with the cloud-based computing system

12   in order to obtain data identifying a next one or more media items that are in the remote playback

13   queue" (*i.e.*, storing multimedia items in the memory of the playback device). If the term "local

14   playback queue" were read so broadly as to cover a playback device that merely retrieves individual

15   media items from a remote playback queue and stores them in memory, then the '033 patent would

16   involve playing back a local playback queue. However, the claims of the '033 patent include no

17   mention of a "local playback queue" and instead recites that the playback device is playing back a

18   "remote playback queue."

19   Sonos further argues that the "local playback queue" may comprise "a user-selected initial

20   media item and an additional 'Autoplay' media item that was identified by the user's selection of

21   the initial media item." Sonos's conclusory DoE analysis fails to demonstrate that the difference

22   between the claims and Google's accused devices is an insubstantial difference or that the difference

23   meets the function/way/result test. Google's products do not perform substantially the same

24   function, in substantially the same way to achieve substantially the same result. The claimed

25   invention contemplates a system in which a user may "queue up" items in a playback queue and

26   then transfer playback of a "playback queue" from a control device to a playback device. '615

27   patent, 17:12-20. The user may select media items (e.g., individual tracks or playlists provided by

28   online music providers, or station) that should be added to the "playback queue," and may add,

1 delete, or move tracks, or may play them back in a particular order (shuffled, unshuffled, repeat

2 track, etc.). '615 patent, 16:55-59, 16:25-31. Because the accused Autoplay feature is not part of

3 the "playback queue," it does not provide the features and functionalities of a queue. Users cannot

4 edit the Autoplay media items, cannot move them around, cannot play them back in an unshuffled

5 order, cannot delete them, etc. In other words, Sonos's DoE argument essentially removes the

6 requirement that the "playback device" playback a "playback queue" and reads the term so broadly

7 as to cover any gapless playback of audio. There is a substantial difference between playing back

8 media items from a playback queue, versus playing back a recommended set of media that is not

9 added to the playback queue.

10   Sonos lastly argues that there is an insubstantial difference between having a playback device

11 that causes playback of media content to be transferred to a local playback queue that is previously

12 populated with resource locators for the media items selected by the user and transferring playback

13 to a playback device that is not already previously populated with resource locators for the media

14 items selected by the user. But Sonos has not shown that Google's accused products add resource

15 locators to any alleged playback queue–whether populated or unpopulated. Instead, Sonos merely

16 argues that resource locators are added to a variable in memory. Claim 13 of the '615 patent recites

17 "*adding*, to the local playback queue, one or more resource locators." By accusing resource locators

18 that are allegedly added to a variable in memory, rather than "the local playback queue," Sonos

19 applies DoE in a manner that would completely eliminate a claim element–i.e., render the

20 requirement of adding resource locators to the "local playback queue" inconsequential and

21 ineffective. As explained above, Sonos has not pointed to any playback queue structure, or

22 equivalent to a playback queue structure. Thus, Sonos cannot show that one or more resource

23 locators are added to such a structure (whether it is populated or unpopulated).

24   Google further responds by referring Sonos to the source code produced in this case,

25 including the following exemplary source code files: innertube_watch_next.py, remote.ts, watch.ts,

26 loungeadapter.ts, videoplayer.js, RealLoungeSessionManager.java, LoungeSession.java,

27 CloudSession.java, CastV3Session.java, MdxSessionFactory.java.

28

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'615 Patent, Claims 14-15, 18-21

Claims 14-15 and 18-21 depend on Claim 13. Accordingly, Google does not infringe these claims at least for the reasons identified in connection with Claim 13.

Additionally, the term "media particular playback system" in Claim 15 was held indefinite. Thus, Google cannot infringe claim 15 because it is invalid.

Further, the accused YouTube applications do not infringe Claims 14 and 15 for the additional reason that Sonos has not shown the accused YouTube applications "detect[] a set of inputs to transfer playback from the control device to" a "particular zone of a media playback system" or a "particular zone group of a media particular playback system." The accused YouTube applications are not concerned with and do not use "zones" or "zone group." At most, Sonos's contentions identify traditional speaker groupings. A grouping of speakers in the accused YouTube applications do not require or suggest that the speakers are part of a particular area of "zone," and, in fact, speakers may be located in different areas.

The accused YouTube applications do not infringe claim 18 for the additional reason that Sonos has not shown the accused YouTube applications transfer playback from the playback device back to the control device. At most, Sonos has shown that the accused YouTube applications permit the alleged control device to stop casting.

The accused YouTube applications do not infringe claim 21 for the additional reason that Sonos has not shown the accused YouTube applications "send[] a message to the streaming content service that causes the one or more first cloud servers to add the multimedia content to the local playback queue on the particular playback device." For example, Sonos points to a "setPlaylist" message as causing the MDx server to add one or more videoIDs. However, Sonos has not shown that the videoID is the actual "multimedia *content*," and Sonos also has not shown that the videoID is added to the "local playback queue."

'615 Patent, Claim 25

Claim 25 recites a "control device comprising: a graphical interface; a wireless communication interface to communicate with a playback device; one or more processors." The remaining limitations of Claim 25 correspond to the limitation of claim 13 discussed above. Google

1 does not infringe these limitations for the reasons discussed in connection with claim

2 13. Additionally, Google does not infringe Claim 25 because Sonos has not shown Google sells,

3 offers to sell, or imports into the United States a "control device comprising: a graphical interface;

4 a wireless communication interface to communicate with a playback device; one or more

5 processors" that contains the accused application and functionality.

6   **'615 Patent, Claim 26**

7   Claim 26 depends on Claim 25. Accordingly, Google does not infringe these claims at least

8 for the reasons identified in connection with Claim 25.

9   Additionally, the term "media particular playback system" in Claim 26 was held

10 indefinite. Thus, Google cannot infringe claim 26 because it is invalid.

11   Further, the accused YouTube application do not infringe Claim 26 for the additional reason

12 that Sonos has not shown the accused YouTube applications "detect[] a set of inputs to transfer

13 playback from the control device to a particular zone group of a media particular playback

14 system." The accused YouTube applications are not concerned with and do not use "zones" or

15 "zone group." At most, Sonos's contentions identify traditional speaker groupings. A grouping of

16 speakers in the accused YouTube applications do not require or suggest that the speakers are part of

17 a particular area of "zone," and, in fact, speakers may be located in different areas.

18   *Google Play Music*

19   Google announced plans to shut down Play Music in June of 2018. By August 2020, Google

20 announced a detailed shutdown timeline starting in late August and ending with complete turndown

21 in December. Google began shutting down the Google Play Music application in September with

22 all   usage   of   the   service   discontinued   in   December

23 2020. https://support.google.com/youtubemusic/thread/62843644/google-play-music-music-play-

24 store-music-manager-are-going-away-%E2%80%93-everything-you-need-to-know?hl=en. Sonos

25 did not provide Google with actual notice of the asserted patents until at least September 28, 2020

26 when it provided a copy of the complaint, and cannot obtain pre-complaint damages due to its failure

27 to mark. Sonos has not provided any evidence that Google made, used, offered for sale or sole

28 computing devices with the Google Play Music application on or after September 28, 2020, and thus

1 has failed to demonstrate any infringement. And while Google denies any infringement, given its

2 decision to discontinue the Google Play Music service in September any alleged infringement would

3 be *de minimis*, at best, and therefore warrant dismissal of Sonos's allegations for Google Play

4 Music. *See, e.g.*, *Nichia Corp. v. Seoul Semiconductor Co., Ltd.*, 2007 WL 2428040 (N.D. Cal.

5 2007) (granting patentee summary judgment dismissing accused infringer's *de minimis*

6 infringement defense where allegedly only 40 accused diodes had been sold).

7   **'615 Patent, Claim 13**

8   "**wherein transferring playback from the control device to the particular playback**

9 **device comprises: causing one or more first cloud servers to add multimedia content to a local**

10 **playback queue on the particular playback device, wherein adding the multimedia content to**

11 **the local playback queue comprises the one or more first cloud servers adding, to the local**

12 **playback queue, one or more resource locators corresponding to respective locations of the**

13 **multimedia content at one or more second cloud servers of a streaming content**

14 **service.**" Sonos's contentions fails to demonstrate that this limitation is satisfied for many reasons.

15   For example, Sonos appears to contend that audio alone may be the claimed "multimedia

16 content." But the term "multimedia" has been construed as having its "plain meaning." The plain

17 meaning of "*multi*media" requires multiple forms of media (*e.g.*, audio and video). *See, e.g.,*

18 *Multimedia,* The Computer Glossary (9ᵗʰ edition, 2001), *Multimedia,* Microsoft's Computer

19 Dictionary (5ᵗʰ edition, 2002). Because audio alone is a single, not multiple, media, Sonos's

20 contentions that rely upon audio alone fail to satisfy this limitation.

21   As another example, Sonos has failed to identify a "local playback queue on the particular

22 playback device." Without any "local playback queue" to point to, Sonos alleges as follows:

23   In this regard, Sonos contends that Google's data structure
             "itemWindowResponse.items" amounts to the claimed "local
24   playback queue" with each of the "itemID" and "trackUrl" of the
             "nextItem" amounting to the "one or more resource locators
25   corresponding to respective locations of the multimedia content."

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1   *See, e.g.,* Infringement Contention, Ex. A at 107. None of these theories satisfy the claims

2   under Google's or Sonos's proposed construction. The Google Play Music services uses a cloud

3   queue, not a "local playback queue."

4   Specifically, as proposed by Google, a "playback queue" is "an ordered list of multimedia

5   items that is selected by the user for playback." In receivers using the accused Google Play Music

6   service the ordered list of multimedia items that is selected by the user for playback is stored on a

7   Cloud Queue server. *See, e.g.,* GOOG-SONOSWDTX-00041650 at 55. It is not stored locally on

8   the receiver. Sonos's "local playback queue" theory merely point to data that relates to entries in

9   the queue that is stored on the Cloud Queue server. While a receiver may choose to retrieve and

10   buffer (or cache) data related to the queue that is stored in the cloud to optimize playback (*e.g.,* the

11   itemID and track URLs), that data is not the ordered list of multimedia items selected by the user

12   for playback. Thus, Sonos's theory fail for at least the reason that Google maintains a cloud queue,

13   not a local playback queue.

14   Sonos has also failed to show a "local playback queue" under its own construction. Sonos

15   contends that the term "local playback queue" should be given its "plain and ordinary"

16   meaning. Sonos does not identify how the plain meaning differs from Google's construction, or

17   what Sonos contends is the "plain and ordinary meaning" of "local playback queue." A person of

18   skill in the art would understand that a playback queue is stored in a data structure by linking together

19   different multimedia items in a particular order using linked lists, arrays, vectors, or other well-

20   known data structures. Where a queue is maintained in the cloud, which is the case with the accused

21   Google Play Music applications, the client device may choose to retrieve and buffer (or cache) data

22   related to the queue stored in the cloud in order to optimize playback. Persons of skill in the art

23   would recognize that this buffered data serves a very different purpose from a queue and are not the

24   queue themselves. Buffers can be used to quickly cache information such that access to it is more

25   immediate than to a resource in a more remote portion of the storage hierarchy. Queues, in contrast,

26   are created to organize and store (in this context) multimedia items for playback. These are distinct

27   concepts and a person of skill in the art would not confuse or conflate them.

28

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1   That Sonos has failed to show Google Play Music includes a "local playback queue" is also

2   demonstrated by the history of the parties' collaboration and Sonos's own documents. The

3   functionality Sonos accuses of infringement is the Cloud Queue functionality that was developed in

4   connection with the parties' collaboration in 2013, and described in the Cloud Queue API. As part

5   of that collaboration, Google and Sonos collaborated and released and integrated a cloud queue API

6   into Google Play Music. As the Cloud Queue API document explains, the Cloud Queue replaces a

7   local playback queue by "move[ing] the queue to the Cloud Queue server"

8   In the current implementation of cast in Play Music, the device
        running the Music app (i.e., the sender) queues tracks to the
9   Chromecast of Sonos device (i.e., the Receiver). If the Sender leaves
        the network or is switched off, playback stops as well. By moving
10   the queue to the Cloud Queue server, the Receiver can fetch tracks
        without requiring the Sender to be around.

11

12   GOOG-SONOSWDTX-00037081; *see also* GOOG-SONOSWDTX-00043627 at 32-

13   33. Google's source code also repeatedly refers to the accused playback devices playing back a

14   Cloud Queue or items in the Cloud queue. *See, e.g.,* playermanager.js, line 2730-2755 ("Start

15   playing the current cloud queue item"), 2757-2770 ("Start playing the current cloud queue item and

16   fetch a window containing the previous, current, and next items").

17   The accused ItemWindowResponse does not show a "local playback queue." Caching a

18   window of "track" URLs from the Cloud Queue in order to optimize playback is merely an

19   implementation detail of playing back a remote Cloud Queue. The window of tracks is not the

20   playback queue, which remains stored on the Cloud Queue. Indeed, the Cloud Queue stored in the

21   CQ servers contains a list of itemIds corresponding to the items in the Cloud Queue and further

22   metadata about the queue. These include, for instance, the normal playback order of the items,

23   whether shuffle mode is enabled, the shuffled playback order of the items, and the playback modes

24   (e.g., repeat track). *See* cloud_queue.proto, lines 303-327, 232-257. The getItemWindow response,

25   in contrast, contains a static set of items that do not support the same type of queue

26   management. Further, Sonos's own Developer website, which describes Sonos's Cloud Queue API,

27   includes the retrieval of an itemWindow, which obtains a "window of tracks," as part of the Cloud

28   Queue API functionality, thereby confirming that retrieving a window of tracks from a Cloud Queue

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1   stored remotely is an implementation detail of the "cloud queue" functionality and not a "local

2   playback   queue."   https://developer.sonos.com/reference/cloud-queue-api/get-

3   itemwindow/. Similarly, in 2014 Sonos filed a patent provisional application entitled "Cloud

4   Queue" naming Tad Coburn as an author. U.S. Application No. 62/007,906. Under the heading

5   "terminology" Sonos referred to the "CloudQueue as a replacement for the queue data structure

6   stored within a Sonos player." *Id*. at 17. The application also confirms that caching a window of

7   tracks locally is not the playback queue by explaining that "the player fetches an initial window of

8   tracks from the CloudQueue and stores (caches) it locally." *Id*. at 22.   This serves as further

9   evidence that Sonos is accusing details of implementing a cloud queue, not a local playback queue.

10   Additionally, Google does not infringe Claim 13 because Sonos has not shown

11   Google sells, offers to sell, or imports into the United States a "a control device to implement a

12   method," e.g., the control device "causing a graphical interface to display a control interface

13   including one or more transport controls to control playback by the control device," that contains

14   the accused application and functionality.

15   **'615 Patent, Claims 14-15, 18-21**

16   Claims 14-15 and 18-21 depend on Claim 13. Accordingly, Google does not infringe these

17   claims at least for the reasons identified in connection with Claim 13.

18   Additionally, the term "media particular playback system" in Claim 15 was held

19   indefinite. Thus, Google cannot infringe claim 15 because it is invalid.

20   Further, the accused Google Play Music application does not infringe Claims 14 and 15 for

21   the additional reason that Sonos has not shown the accused Google Play Music application "detect[s]

22   a set of inputs to transfer playback from the control device to" a "particular zone of a media playback

23   system" or a "particular zone group of a media particular playback system." The accused Google

24   Play Music application is not concerned with and do not use "zones" or "zone groups." At most,

25   Sonos's contentions identify traditional speaker groupings. A grouping of speakers in the accused

26   Google Play Music application does not require or suggest that the speakers are part of a particular

27   area of "zone," and, in fact, speakers may be located in different areas.

28

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1   The accused Google Play Music application does not infringe claim 18 for the additional

2 reason that Sonos has not shown the accused YouTube applications transfer playback from the

3 playback device back to the control device. At most, Sonos has shown that the accused Google Play

4 Music application permits the alleged control device to stop casting.

5   The accused Google Play Music application does not infringe claim 21 for the additional

6 reason that Sonos has not shown the accused Google Play Music application "send[s] a message to

7 the streaming content service that causes the one or more first cloud servers to add the multimedia

8 content to the local playback queue on the particular playback device." Indeed, Sonos's

9 infringement contentions discuss only a "setPlaylist" message for the YouTube applications. Sonos

10 does not explain how this limitation is satisfied for Google Play Music and thus has not met its

11 burden for the Google Play Music application.

12   **'615 Patent, Claim 25**

13   Claim 25 recites a "control device comprising: a graphical interface; a wireless

14 communication interface to communicate with a playback device; one or more processors." The

15 remaining limitations of Claim 25 correspond to the limitation of claim 13 discussed above. Google

16 does not infringe these limitations for the reasons discussed in connection with claim

17 13. Additionally, Google does not infringe Claim 25 because Sonos has not shown Google sells,

18 offers to sell, or imports into the United States a "control device comprising: a graphical interface;

19 a wireless communication interface to communicate with a playback device; one or more

20 processors" that contains the accused application and functionality.

21   **'615 Patent, Claim 26**

22   Claim 26 depends on Claim 25. Accordingly, Google does not infringe these claims at least

23 for the reasons identified in connection with Claim 25.

24   Additionally, the term "media particular playback system" in Claim 26 was held

25 indefinite. Thus, Google cannot infringe claim 26 because it is invalid.

26   Further, the accused Google Play Music application does not infringe Claim 26 for the

27 additional reason that Sonos has not shown the accused Google Play Music applications "detect[s]

28 a set of inputs to transfer playback from the control device to a particular zone group of a media

1   particular playback system." The accused Google Play Music application is not concerned with and

2   do not use "zones" or "zone group." At most, Sonos's contentions identify traditional speaker

3   groupings. A grouping of speakers in the accused Google Play Music application do not require or

4   suggest that the speakers are part of a particular area of "zone," and, in fact, speakers may be located

5   in different areas.

6   Google further responds by referring Sonos to the source code produced in this case,

7   including   the   following   exemplary   source   code   files: cloud_queue_rpc.proto,

8   GetItemWindowImpl.java,   playermanager.js,   cloudqueue.js,   getitemwindowrequest.js,

9   cloudqueueexterns.js, CloudQueueManager.java, CloudQueueSyncCoordinator.java, constant.js.

10   **'033 Patent**

11   **'033 Patent, Claim 1**

12   "**computing device comprising: at least one processor; a non-transitory computer**

13   **readable medium…**" Google does not infringe Claim 1 because Sonos has not shown Google sells,

14   offers to sell, or imports into the United States a "computing device comprising: at least one

15   processor; [and] a non-transitory computer readable medium" that contains the accused application

16   and functionality.

17   "**based on receiving the user input, transmitting an instruction for the at least one given**

18   **playback device to take over responsibility for playback of the remote playback queue from**

19   **the computing device, wherein the instruction configures the at least one given playback device**

20   **to (i) communicate with the cloud-based computing system in order to obtain data identifying**

21   **a next one or more media items that are in the remote playback queue, (ii) use the obtained**

22   **data to retrieve at least one media item in the remote playback queue from the cloud-based**

23   **media service; and (iii) play back the retrieved at least one media item**." Sonos's contentions

24   fails to demonstrate that this limitation is satisfied. For example, Sonos's contentions allege that

25   based on receiving the user input, a YouTube application running on the alleged computing device

26   transmits a "setPlaylist" message "to one or more MDx servers." Sonos's Infringement Contention,

27   Ex. B at 37. The MDx servers then generate a further set Playlist message "requesting the screen to

28   start playing the video identified by the videoID from the currentTime." *See, e.g.,* GOOG-

1   SONOSWDTX-00041650 at 57. Thus, it is the MDx server, not the alleged computing device, that

2   transmits an instruction for the at least one given playback device to take over responsibility for

3   playback.

4   Moreover, Sonos has failed to demonstrate that the setPlaylist message (whether from the

5   computing device or the MDx server) performs all the functions required by the claim, namely: (i)

6   communicate with the cloud-based computing system in order to obtain data identifying a next one

7   or more media items that are in the remote playback queue, (ii) use the obtained data to retrieve at

8   least one media item in the remote playback queue from the cloud-based media service; and (iii)

9   play back the retrieved at least one media item." The setPlaylist message does not perform all of

10   these functions. Instead, there are multiple API requests and messages that occur after the setPlaylist

11   request between the server and the cast receiver to obtain data to play back from the alleged remote

12   playback queue.

13   "**remote playback queue provided by a cloud-based computing system associated with**

14   **a cloud-based media service."** The only written description support for this limitation in the '033

15   patent is for a remote playback queue managed by a third-party. Thus, a person of ordinary skill in

16   the art would understand that the plain meaning of a "remote playback queue provided by a cloud-

17   based computing system associated with a cloud-based media service" in the context of the claims

18   and specification requires a third-party playback queue. The CloudQueue server or MDx is only

19   provided by Google, not supplied by third parties.

20   **"detecting an indication that playback responsibility for the remote playback queue**

21   **has been successfully transferred from the computing device to the at least one given playback**

22   **device."** Sonos's contentions fail to demonstrate that this limitation is satisfied. For example,

23   Sonos argues that the "cast button" changing colors demonstrates that the computing device detects

24   the claimed indication. But Sonos has not identified what specifically it contends is the indication

25   that is detected by the computing device or how it satisfies the claims. Sonos appears to rely upon

26   the YouTube application detecting a successful connection to an MDxSession. Sonos's

27   Infringement Contentions, Ex. B at 57. But Sonos has failed to articulate how a connection to an

28   MDxSession indicates that playback responsibility has been successfully transferred. An MDx

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1   Session is established prior to playback on the screen or speaker, and Sonos has failed to show that

2   playback responsibility from the alleged computing device to the alleged at least one given playback

3   device is one and the same with connection to an MDxSession.

4   　　　　　Sonos has also failed to show that the claims are satisfied under the doctrine of equivalents

5   ("DoE"). Initially, Sonos's DoE analysis is conclusory and does not cite to evidence or provide an

6   explanation that might support a finding of infringement under DoE. Thus, Sonos has failed to meet

7   its burden under DoE. To the extent Sonos is permitted to expand upon its DoE analysis or provide

8   additional evidence or explanation, Google reserves the right to supplement its response.

9   　　　　　Additionally, as it does for the '615 patent, Sonos argues that under DoE the "playback

10   queue" the "Autoplay" feature may be considered part of the playback queue. Sonos's conclusory

11   DoE analysis fails to demonstrate that the difference between the claims and the accused AutoPlay

12   feature is an insubstantial difference or that the difference meets the function/way/result

13   test. Google's products do not perform substantially the same function, in substantially the same

14   way to achieve substantially the same result. The claimed invention contemplates a system in which

15   a user may "queue up" items in a playback queue and then transfer playback of a "playback queue"

16   from a control device to a playback device. '033 patent, 17:10-17. The user may select media items

17   (e.g., individual tracks or playlists provided by online music providers, or station) that should be

18   added to the "playback queue," and may add, delete, or move tracks, or may play them back in a

19   particular order (shuffled, unshuffled, repeat track, etc.). '615 patent, 16:51-55, 16:22-26. Because

20   the accused Autoplay feature is not part of the "playback queue," it does not provide the features

21   and functionalities of a queue. Users cannot edit the Autoplay media items, cannot move them

22   around, cannot play them back in an unshuffled order, cannot delete them, etc. In other words,

23   Sonos's DoE argument essentially removes the requirement that the "playback device" playback a

24   "playback queue" and reads the term so broadly as to cover any gapless playback of audio. There

25   is a substantial difference between playing back media items from a playback queue, versus playing

26   back a recommended set of media that is not added to the playback queue.

27

28

'033 Patent, Claims 2, 4, 9, 11, 16

Claims 2, 4, 9, 11, and 16 depend on Claim 1. Accordingly, Google does not infringe these claims at least for the reasons identified in connection with Claim 1.

Further, the accused YouTube applications do not infringe Claim 2 for the additional reasons that Sonos has not shown "the instruction comprises an instruction for the cloud-based computing system associated with the media service to provide the data identifying the next one or more media items to the given playback device for use in retrieving the at least one media item from the cloud-based computing system associated with the cloud-based media service." For example, Sonos points to the transmission of a "setPlaylist" message for this limitation. But the setPlaylist message does not cause a media service to "provide the data identifying the *next* one or more media items to the given playback device for use in retrieving the at least one media item from the cloud-based computing system." At most, Sonos has shown that the setPlaylist message causes the MDx server to provide a videoID corresponding to the media item that is currently playing. Further, the accused YouTube applications do not infringe Claim 11 for the additional reasons that Sonos has not shown "a displayed icon indicating that playback responsibility for the remote playback queue can be transferred."

Claim 12.

Claim 12 recites the same limitations as Claim 1. Accordingly, Google does not infringe this claim at least for the reasons identified in connection with Claim 1.

Claim 13.

Claim 13 depends on Claim 12. Accordingly, Google does not infringe these claims at least for the reasons identified in connection with Claim 12.

Further, the accused YouTube applications do not infringe Claim 13 for the additional reasons that Sonos has not shown "the instruction comprises an instruction for the cloud-based computing system associated with the cloud-based media service to provide the data identifying the next one or more media items to the given playback device for use in obtaining the at least one media item from the cloud-based computing system associated with the cloud-based media service." For example, Sonos points to the transmission of a "setPlaylist" message for this

1   limitation. But the setPlaylist message does not cause a media service to "provide the data

2   identifying the *next* one or more media items to the given playback device for use in retrieving the

3   at least one media item from the cloud-based computing system." At most, Sonos has shown that

4   the setPlaylist message causes the MDx server to provide a videoID corresponding to the media

5   item that is currently playing.

6   **'885 and '966 Patents**

7   ***Direct Infringement By Google***

8   Sonos accuses Google of directly infringing by "offering to sell, selling, and/or importing

9   into the United States" its "Pixel" brand of computing devices in violation of 35 U.S.C. §

10 271(a). However, Sonos has not provided any evidence that Pixel devices include the accused

11 Google Home applications that Sonos contends are necessary for infringement when offered for

12 sale, sold or imported in the United States.

13   Sonos also purports to identify numerous third-party devices in an Appendix 1 to the

14 infringement contentions. Sonos has not provided any evidence that Google offers to sell, sells or

15 imports into the United States any or all of the devices in Appendix 1. Nor has Sonos shown that

16 any or all of these devices are even capable of including the accused Google Home application. For

17 example, Sonos has not provided any evidence that Google offers to sell, sells or imports into the

18 United States any Arirang (North Korean) devices, or Yota (Russian device), or that these North

19 Korean and Russian devices are even capable of including the accused Google Home applications.

20   Sonos further alleges that Google infringes the asserted claims "by virtue of installing at

21 least the Google Home app onto computing devices, which constitutes 'mak[ing]' an infringing

22 device under 35 U.S.C. § 271(a)" and because "Google has directly infringed and continues to

23 directly infringe each asserted claim of the '885 Patent by virtue of using Cast-enabled media

24 players, which constitutes 'us[ing]' an infringing device under 35 U.S.C. § 271(a)." But Sonos has

25 not provided any evidence that Google installs the accused applications onto the accused computing

26 devices or Cast-enabled media players. Nor has Sonos shown that any updates (*e.g.*, firmware

27 updates) would include the accused functionality. Accordingly, Sonos has not shown any "making"

28 of an infringing device by Google.

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1   Sonos further alleges that Google infringes the asserted claims "by virtue of testing

2 computing devices installed with at least the Google Home app, which constitutes 'us[ing]' an

3 infringing device under 35 U.S.C. § 271(a)." Again, Sonos has failed to produce any evidence or

4 identify any instance in which Google has tested or us used the devices in the manner that is accused

5 of infringing the asserted patents. Nor has Sonos provided any evidence that the damages theories

6 that it has disclosed in its Damages Contentions are tied to any internal use or testing by Google.

7   Sonos additionally alleges that Google infringes because it "operates servers in the United

8 States" that "host at least the Google Home app for download onto smartphone, tablet, and computer

9 devices, and these servers infringe certain asserted claims." Initially, the claims at issue recite a

10 "computer-readable media having instructions encoded therein" that when executed perform certain

11 functional steps. Sonos has not provided any evidence that Google's servers can or have performed

12 the method steps in these claims, or that they are capable of doing so. In fact, Google's computer

13 servers do not include a computer readable media with instructions that can be executed to perform

14 the steps of the claims. Google's servers are not a controller, do not connect to a local area network,

15 do not have the required graphical user interface or display, do not receive a request to create zone

16 scenes, do not cause creation of zone scenes, do not store zone scenes, do not configured for any

17 type of playback, do not receive indications regarding zone scenes, do not transition between

18 standalone and modes coordinating with other zone players, are not a zone player, and do not output

19 media in synchrony. Further, Sonos has not offered any evidence that any information stored on

20 Google's servers is executable as Sonos accuses for software installed on the accused

21 devices. Sonos has also accused computing devices and playback devices that are not provided by

22 Google such that Google would not directly infringe these claims. *See Deep9 Corp. v. Barnes &*

23 *Noble, Inc.*, No. C11-0035JLR, 2012 WL 4336726 (W.D. Wash. Sept. 21, 2012) (computer readable

24 media claim not infringe where accused infringer did not provide the "common communications

25 channel" limitation because the product guide and terms of service specified "that it is the user's

26 choice as to what internet service provider to use").

27

28

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Indirect Infringement By Google

Google contends that it has not (1) contributed to the direct infringement of the Asserted Claims (contributory infringement); or (2) induced any third party to infringe the Asserted Claims directly (induced infringement).

Sonos's indirect infringement claims are subject to a pending motion to dismiss at least with respect to the '033, '966, and '885 patents, and Google incorporates by reference its briefing.

Contributory infringement requires that an alleged infringer, with knowledge of the patent, sells, offers to sells, and/or imports into the U.S. a material part or component of the invention, knowing that it is especially made or adapted for infringement, and not a staple article or commodity suitable for substantial non-infringing use. 35 U.S.C. § 271(c). "For purposes of contributory infringement, the [substantial noninfringing use] inquiry focuses on whether the accused products can be used for purposes other than infringement." *In re Bill of Lading Transmission and Processing Sys. Patent Litig.*, 681 F.3d 1323, 1338 (Fed. Cir. 2012). Here, the accused products, and components thereof, have substantial non-infringing uses. For example, the '966 and '885 patents claim a "computing device" and "zone player" which Sonos has mapped to a smartphone, tablet, or other computing device and audio playback devices, respectively. The accused computing devices can be used for many functionalities that are not even related to playback of media, such as making phone calls, browsing the Internet, sending email communications, and numerous other functionalities. Sonos also alleges that Google infringes the Asserted Patents by way of the Google Home application and specifically its grouping-related functionality, but this application has many other features unrelated to speaker grouping, including Wi-Fi monitoring, thermostat control, smart home device control, individual device playback, and many others. Thus, any and all components of the Accused Products have substantial non-infringing uses.

With respect to induced infringement, Google has not, with knowledge of the patent and infringement thereof, actively induced its customers or end-users to infringe the Asserted Patents with specific intent to encourage infringement. 35 U.S.C. § 271(b); *see Commil USA, LLC v. Cisco Sys., Inc.*, 135 S. Ct. 1920, 1928 (2015). Sonos has not identified any evidence that Google actively induced customers or end-users to infringe or that Google did so with the specific intent to encourage

1 infringement. There is no evidence that Google knew of the alleged infringement; in fact, Sonos

2 admits that Google did not have knowledge of the '966 and '885 patents until just hours before the

3 filing of the action. Accordingly, there is no evidence suggesting that Google took actions with the

4 specific intent to encourage any infringement.

5 ***Alleged Infringement Under Section 271(f)***

6   In order to be liable for infringement under § 271(f), a defendant must "suppl[y]"

7 components of a patented invention "in or from the United States" with the intent that they will be

8 "combined outside of the United States in a manner that would infringe the patent if such

9 combination occurred within the United States." *See* § 271(f)(1)-(2). Google does not supply

10 components of a patented invention in or from the United States in this fashion.

11   Google provides a further response on an element by element basis below for each of the

12 Asserted Patents.

13   The '885 and '996 Patents share the claim elements addressed below and therefore are not

14 infringed for the same reasons.

15   "**zone player**": Google does not infringe Claim 1 because Sonos has not shown Google

16 sells, offers to sell, or imports into the United States a "zone player" that contains the accused

17 application and functionality. For example, the accused "Cast-enabled media players" are

18 identified as including the "Chromecast, Chromecast Audio, Chromecast Ultra, Chromecast with

19 Google TV." Ex. D at 1-2. Yet Sonos has not shown any evidence that these devices can perform

20 the functions or meet the requirements of the claimed "zone player(s)." As one example, the

21 claims require that the "zone player is configured to play back media individually." The evidence

22 produced by Sonos in its contentions, however, shows that none of these products are capable of

23 "playing back media individually." They do not contain any means for doing so, and can only be

24 connected to other devices with playback capability.

25   Sonos argues that "Because each Cast-enabled media player is a data network device (i.e.,

26 a device that is configured to connect to and communicate over a medium that interconnects

27 devices in a manner that enables them to send digital data packets to and receive digital data

28 packets from each other) and is configured to process and output audio, each Cast-enabled media

1 player comprises a 'zone player.'" Ex. D at 1-2. Sonos therefore recognizes that the claimed

2 "zone player" requires more than simply connecting devices to a network. Indeed, Sonos argues

3 that the zone player must be "configured to process and output audio," which Sonos has failed to

4 show for each "Cast-enabled media player."

5   Sonos also purports to accuse "various other third-party media players with built-in Cast

6 functionality," but does not identify any such third-party media players. Google does not know

7 which products Sonos is purportedly referring to. Sonos has therefore failed to meet its burden of

8 proof regarding infringement and Google accordingly denies infringement.

9   "**network interface**": Sonos's contentions fail to demonstrate that this limitation is

10 satisfied. For example, Sonos has neither identified any hardware nor any software that constitutes

11 the claimed "network interface" within the "Cast-enabled media players." Sonos generically

12 references "Wi-Fi," but does not identify any Wi-Fi hardware, software, adapters, nor any particular

13 Wi-Fi version or compatibility for each of the "Cast-enabled media players."

14   "**processor**": Sonos's contentions fail to demonstrate that this limitation is satisfied. For

15 example, Sonos has not identified any hardware that constitutes the claimed "processor" within the

16 "Cast-enabled media players." Sonos generically references the specifications pages for some of

17 the "Cast-enabled media players," but in many instances there is no processor information provided.

18   "**non-transitory computer readable medium**": Sonos's contentions fail to demonstrate

19 that this limitation is satisfied. For example, Sonos has not identified any hardware that constitutes

20 the claimed "non-transitory computer readable medium" within the "Cast-enabled media

21 players." Sonos generically references the specifications pages for some of the "Cast-enabled media

22 players," but there is not "non-transitory computer readable medium" identified.

23   "**zone scene**": Sonos's contentions fail to demonstrate that this limitation is satisfied. For

24 example, Sonos's argument that the alleged "speaker groups" are the claimed "zone scene" is

25 flawed. Sonos argues that:

26   Thus, this first "speaker group" that a user creates amounts to the claimed "first zone scene
        comprising a first predefined grouping of zone players including at least the first zone player
27   and a second zone player that are to be configured for synchronous playback of media when
        the first zone scene is invoked" because it is a previously-saved group of Cast-enabled
28   players that has been predefined to include the first Cast-enabled media player and a second

1 Cast-enabled media player and that is capable of existing in two states – an uninvoked state
2 in which each Cast-enabled player in the previously saved group is configured for individual
   playback of audio and an invoked state in which the Cast-enabled players in the previously-
3 saved group are configured for synchronous playback of audio.

4 As the intrinsic evidence, extrinsic evidence, and the court's claim construction held, however,

5 "zone scenes" are not mere "speaker groups" as Sonos alleges in its infringement

6 contentions. Sonos's allegation that the groups are "previously saved" is unclear as Sonos does not

7 identify what the groups were saved "previous" to. Sonos's allegation that the groups are

8 "predefined" is unclear as Sonos does not identify when the groups were defined or what would

9 make them predefined. Sonos also mentions an "invoked" and an "uninvoked" state for the zone

10 players, but does not identify why or how this is relevant to its conception of "zone scenes." Nor

11 has Sonos identified the "invoked" and "uninvoked" states that allegedly reflect any states in the

12 accused products.

13   Next, Sonos argues that the accused products meet the "zone scene" definition if the claim

14 construction is maintained:

15   Moreover, even if the Court were to construe the term "zone scene" to mean "a previously-
        saved group of zone players according to a common theme," as Judge Alan Albright
16   suggested during the Markman hearing in 20-cv-881-ADA (see D.I. 106 at 38:1-3), this first
        "speaker group" amounts to a first "zone scene" under that construction. Indeed, every
17   "speaker group" that a user creates in a Cast-enabled playback system is a previously-saved,
        predefined group of Cast-enabled players that is capable of existing in two states – an
18   uninvoked state in which each Cast-enabled player in the previously-saved group is
        configured for individual playback of audio and an invoked state in which the Cast-enabled
19   players in the previously-saved group are configured for synchronous playback of audio.

20
   This is the same argument addressed immediately above, and it fails for the same reason here. Next,
21
   Sonos argues why it believes the accused products use a "common theme":
22
        Further, every "speaker group" that a user creates in a Cast-enabled playback system has
23   some common theme, which in this context amounts to whatever common topic, subject,
        etc. led the user to decide that these particular Cast-enabled media players should be placed
24   into a previously-saved group that allows for synchronous playback when invoked.
        [*Citations omitted*] Typically, this common theme will be a specific area (or set of areas)
25   within the user's listening environment in which the user desires to listen to audio in
        synchrony across multiple Cast-enabled media players, although Google's "Cast"
26   technology provides a user with the flexibility to create a previously saved group of Cast-
        enabled media players according to any common topic or subject that is of interest to the
27   user. As part of the user workflow for creating a "speaker group," a Cast-enabled computing
        device also prompts the user to input a name for the "speaker group," which serves as the
28   user's shorthand label of the common theme that led the user to create the previously-saved

1   group of Cast-enabled media players and thereby allows the user to locate and select that previously-saved group later when the user wishes to invoke it for synchronous playback.

2

3   This argument also fails. Sonos alleges that the common theme is "whatever common topic,

4   subject, etc. let the user to decide that these particular Cast-enabled media players should be placed

5   into a previously-saved group . . . ," but never identifies any accused common theme. Nor does

6   Sonos identify how the accused products store or are even aware of any accused common

7   theme. Because the patent claims must provide objective notice of the scope of the patentee's rights,

8   Sonos's interpretation of the claim, which makes the scope dependent on the accused infringer's

9   state of mind at the time of allegedly committing the infringing act, cannot be correct and would

10   render the claim indefinite. *See, e.g., Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d

11   1343, 1353 (Fed. Cir. 2001) ("Amazon's reading of the key passage from the file history injects

12   subjective notions into the infringement analysis … We are not prepared to assign a meaning to a

13   patent claim that depends on the state of mind of the accused infringer."); *see also Boston Scientific*

14   *Corp. v. Cordis Corp.*, 2008 WL 171049, *13 (N.D. Cal. 2008) ("The Court questions the

15   permissibility of a claim limitation that relies on the subjective preference of a person who is

16   performing a method…. the Court declines to adopt a practitioner-based definition of 'no preferred

17   geometric form when disposed' because it would make the claim ambiguous and therefore arguably

18   indefinite."). Sonos does not identify any instrumentality in the accused products that stores or

19   receives the alleged common theme information. Neither does Sonos articulate how, even if its

20   infringement theory is credited, one is to determine when a user creates a group with the alleged

21   "common theme" or does not create a group with the alleged "common theme." To the extent Sonos

22   is arguing that a common theme is necessarily present whenever a group is created, then Sonos has

23   improperly conflated the terms "group" and "zone scene." Indeed, the court already rejected this

24   argument at claim construction where Google identified this flaw. None of the citations Sonos

25   offers support such an understanding of the claims, and the reference to Google's oral argument

26   only supports Google's position, which is that Sonos needs to identify a "common theme" in the

27   accused products, which it has not done. Finally, Sonos argues that a group name "serves as the

28   user's shorthand label of the common theme that led the user to create the previously-saved group,"

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1 and therefore appears to conflate group names with the claimed "zone scene." This is contrary to

2 the specification, which uses group naming and zone scenes separately and distinguishes between

3 them.

4   "**predefined**": Sonos's contentions fail to demonstrate that this limitation is satisfied. For

5 example, Sonos appears to identify the join_group message as creating the "predefined grouping of

6 zone players," but Sonos does not identify when or how the group is "predefined" or what it is

7 defined prior to. *See* Ex. D at 4. Sonos has identified no predefined groups that are created by

8 Google or that are provided with the accused products to customers.

9   **'885 patent: "receiving, from a network device over a data network, a first indication**

10 **that the first zone player has been added to a first zone scene" / "receiving, from the network**

11 **device over the data network, a second indication that the first zone player has been added to**

12 **a second zone scene"**

13   **'966 patent: "causing an indication of the first zone scene to be transmitted to the first**

14 **zone player" / "causing an indication of the second zone scene to be transmitted to the first**

15 **zone player"**

16   Sonos's contentions fail to demonstrate that these limitations are satisfied. For example,

17 Sonos appears to identify the join_group message as meeting these claim elements, but Sonos does

18 not identify when or how the join_group message is received or transmitted after a first or second

19 zone player has been added to a zone scene. Further, Sonos does not identify different

20 instrumentalities meeting this claim element and the "causing creation of the first/second zone

21 scene" element of the '966 patent, and instead identifies the join_group message as satisfying both

22 limitations, which is self-contradictory and inadequate. Sonos accuses the join_group message as

23 creating the claimed "zone scenes," not an indication of those zone scenes, and join_group does not

24 have this functionality.

25   "**invoke**" / "**selected for invocation**": Sonos's contentions fail to demonstrate that this

26 limitation is satisfied. For example, Sonos appears to accuse as "invoking" when a user performs a

27 "'cast' to a previously-created 'speaker group' (and thereby cause the 'speaker group' to be

28 invoked)." Ex. D. at 1. The accused devices are not "invoked" at all as claimed and instead may

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1   continue to be accessed through a tap or other physical interface to the device, permitting control of

2   volume or media playback. Further, Sonos's understanding of the "invoked" and "uninvoked" states

3   is flawed. Sonos argues that the "Cast-enabled media players" are capable of existing in an

4   uninvoked state and an invoked state:

> Cast-enabled media player and that is capable of existing in two states – an uninvoked state
> in which each Cast-enabled player in the previously saved group is configured for individual
> playback of audio and an invoked state in which the Cast-enabled players in the previously-
> saved group are configured for synchronous playback of audio. Ex. D at 5.

8   But even under Sonos's theories, the "Cast-enabled media player" would be "invoked" by a current

9   "cast" command to it that initiated the alleged "individual playback of audio" and also if the "Cast-

10   enabled media player" is playing audio in the "previously-saved" group. Accordingly, Sonos has

11   not made any distinction between an invoked and an uninvoked group or "Cast-enabled media

12   player" and therefore its infringement theories are flawed and Google denies them.

13   Finally, Sonos has not identified any infringement theory for the term "selected for

14   invocation." Ex. D at 10-11. Sonos appears to be accusing the same functionality of being

15   "invoked" and being "selected for invocation," but the terms are different and distinguished by the

16   claims. *Id.* ("the Cast-enabled media player continues to operate in the standalone mode until one

17   of the first 'speaker group' (which is the claimed 'first zone scene') or the second predefined

18   "speaker group" (which is the claimed 'second zone scene') has been selected for

19   invocation."). Sonos has not identified any selection process for 'invoking' and therefore its

20   infringement theories are deficient. The accused products do not practice the "selected for

21   invocation" limitation.

22   **SECOND SUPPLEMENTAL RESPONSE:**

23   Subject to and without waiving the foregoing General and Specific objections, Google

24   further responds, as follows:

25   **'033 Patent (All Asserted Claims)**

26   On November 23, 2022, Sonos filed a motion for leave to amend to add new features and

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28   theories of infringement ("Amended Infringement Contentions"), including citations to numerous

new "exemplary" source code files. Sonos's new allegations are vague, and ambiguous, and do not adequately disclose Sonos's theories of infringement. Google objects to these untimely additions. Nevertheless, to the extent Sonos is permitted to introduce these new theories, Google contends that its products do not infringe for at least the reasons discussed in its prior responses. In addition to the reasons discussed above, Sonos's Amended Infringement Contentions fail to establish that the accused YouTube applications practice at least the following limitations:

"**remote playback queue provided by a cloud-based computing system associated with a cloud-based media service.**" As Google explained in its prior response, a person of ordinary skill in the art would understand that the plain meaning of a "remote playback queue provided by a cloud-based computing system associated with a cloud-based media service" in the context of the claims and specification requires a third-party playback queue. Google does not infringe under the plain meaning because Sonos has not identified any third-party queue. Google incorporates by references the briefing and exhibits on its Motion for Leave to file Supplemental Claim Construction Briefing (Dkt. No. 375).

Google further incorporates by reference its third supplemental response to Sonos's Interrogatory No. 15. As explained in that response, when playing back media on the alleged "computing device," the accused YouTube application plays back a local queue stored on the computing device. Thus, even under Sonos's interpretation of "remote playback queue," Sonos has failed to show the accused YouTube application infringes the "remote playback queue" limitations that require playback of the remote playback queue on the computing device.

"**detecting an indication that playback responsibility for the remote playback queue has been successfully transferred from the computing device to the at least one given playback device.**" Sonos has failed to show that the accused products satisfy this limitation. Sonos contends that the accused products are "programmed with the functionality capability [*sic*] to detect an

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indication that playback responsibility for the remote playback queue has been successfully transferred," and asserts that this limitation is satisfied during a stream transfer because allegedly a "Cast-enabled display will take back over playback responsibility that was the subject of the 'stream transfer' if the Cast-enabled display does not receive such an indication." Sonos's contentions are vague, ambiguous, and do not adequately disclose Sonos's theories of infringement. The claim language requires that the computing device "detect[] an indication that playback responsibility" was "successfully transferred." Even crediting Sonos's allegations, Sonos fails to explain how detecting that playback responsibility was *not* successfully transferred satisfies this limitation.

Moreover, the claims recite that the detection must occur before transitioning from the claimed "first mode" to the claimed "second mode." For example, the limitation that follows the detecting limitation recites: "after detecting the indication, transitioning from i) the first mode in which the computing device is configured for playback of the remote playback queue to ii) a second mode in which the computing device is configured to control the at least one given playback device's playback of the remote playback queue and the computing device is no longer configured for playback of the remote playback queue." Sonos's contentions do not explain how the transition from the "first mode" to the "second mode" occurs "after detecting the indication." For instance, crediting Sonos's allegation that the "Cast-enabled display will take back over playback responsibility that was the subject of the 'stream transfer' if the Cast-enabled display does not receive such an indication," at most shows that the device will not transition from the claimed first mode to the claimed second mode.

In short, Sonos has failed to present any theory establishing that the accused YouTube applications "detect[] an indication that playback responsibility for the remote playback queue has been successfully transferred from the computing device to the at least one given playback device," let alone a detection that occurs before transitioning from the first mode to the second mode.

'033 Patent (Claim 4)

The accused YouTube applications do not infringe Claim 4 for at least the reason that Sonos has not shown a "representation of the one or more playback devices comprises at least one selectable indicator for a group of playback devices that includes the given playback device and one or more other playback devices that are to be configured for synchronous playback of the remote playback queue." The accused YouTube applications do not include functionality for grouping speakers and Sonos has not shown YouTube applications have any awareness of whether a particular icon is for a speaker group. Thus, Sonos has failed to show that icons displayed in the YouTube applications are a "selectable indicator for a group of playback devices."

'885 and '966 Patents

Sonos's infringement contentions are vague and ambiguous, and do not adequately disclose Sonos's theories of infringement. Google contends that its products do not infringe for at least the reasons discussed in its prior responses. Based on source code print requests made by Sonos, which may indicate additional information regarding its infringement contentions, Google also discloses the following, while maintaining that Sonos's Infringement Contentions fail to establish that the accused products practice at least the following limitations:

"standalone mode" (and all related limitations). Google hereby incorporates by reference its responses to Sonos's interrogatory number 18.

"**receiving a fourth request to invoke the second zone scene; and based on the fourth request, causing the first zone player to (a) cease to operate in accordance with the first predefined grouping of zone players such that the first zone player is no longer configured to coordinate with at least the second zone player to output media in synchrony with output of media by at least the second zone player.**" Google's accused products do not infringe because after the computing device "receiv[es] a fourth request to invoke the second zone scene," with

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"invok[ing]" as contended by Sonos, the accused device would remain "configured to coordinate," with at least the second zone player, as required by the claims. Based on Sonos's infringement contentions, "invoking" (as contended by Sonos) the claimed "second zone scene" does not de-configure the first zone player from coordinating with the second zone player as claimed. *See, e.g.*, Almeroth 2022.07.27 Report at ¶289 ("it is this later, post-creation act of 'invoking' the previously-saved 'zone scene' that causes each 'zone player' in the predefined and pre-saved group to configure itself to play back audio in synchrony with the other member(s) of the predefined and pre-saved group – prior to that time, a 'zone player' may receive an indication that it is a member of the previously-created 'zone scene' that facilitates the saving of the previously-created 'zone scene,' but the 'zone player' will not automatically configure itself to play back audio in synchrony with the other member(s) of the predefined group.").

"causing storage of the first zone scene at a location other than the computing device, and wherein causing storage of the second zone scene comprises causing storage of the second zone scene at the location other than the computing device." Google's accused products do not infringe at least because Google's accused products do not store the composition of any given group persistently "at a location other than the computing device" as claimed. Further, the accused products do not store both he accused "first" and "second" "zone scenes" at that same location. Sonos has not alleged that information not stored persistently meets the claim limitation requiring "causing storage," nor has Sonos alleged that a "location" could be a distributed set of devices.

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CERTIFICATE OF SERVICE

2   The undersigned hereby certifies that all counsel of record who have consented to electronic

3 service are being served with a copy of this document via email on November 29, 2022.

4   */s/ Anne-Raphaelle Aubry*
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